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November 28, 2007
Project 04516-2



Ms. Irene M. Dale
Environmental Engineer
Bureau of Waste Site Cleanup
Massachusetts Department of Environmental Protection
205B Lowell Street
Wilmington, MA 01887

Geotechnical
Environmental and
Water Resources
Engineering

Dear Ms. Dale:

**Re: Monthly Remedial Monitoring Report No. 7b
50 Tufts Street Property
50 Tufts Street Site
Somerville, MA
RTN 3-23246 (eDEP Transaction #155351)**

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On behalf of UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. is submitting this Remedial Monitoring Report (RMR) No. 7b for the operation of Active Remedial Systems associated with 50 Tufts Street in Somerville, Massachusetts (the Property), Figure 1. The Massachusetts Department of Environmental Protection (DEP) assigned Release Tracking Number (RTN) 3-23246 to the Site.

RMR No. 7b covers the monitoring period from October 1 to October 31, 2007. This RMR was prepared to meet the requirements of the Massachusetts Contingency Plan (MCP) (310 CMR 40.0000). The original Immediate Response Action (IRA) Transmittal Forms (BWSC105, BWSC105A, and BWSC105B) were submitted by eDEP, and copies are provided in Attachment A. BWSC105 has been completed to reflect current and historic immediate response actions to date associated with RTN 3-23246.

This RMR addresses remedial systems at the Property (refer to Figure 2), which includes a sub-slab depressurization system (SSDS) and a soil vapor extraction (SVE) system, which began operating on April 30, 2007 and August 22, 2007, respectively. The SVE system was installed to remove residual contaminants of concern from soils and to mitigate potential migration of soil vapor, including to 60 Tufts Street (an adjacent residential building). The RMRs associated with the SVE are required monthly following the startup of the system. Because the SSDS and SVE are operated as one integrated system, using the same mechanical equipment and off-gas treatment, operating data for the two systems will be reported jointly.

1. OPERATING STATUS OF ACTIVE REMEDIAL SYSTEM [310 CMR 40.0027(2)(A)]

RMR No. 7b describes monitoring associated with two Active Remedial Systems: the SSDS and SVE at the Property.

Chlorinated volatile organic compounds (VOCs), particularly tetrachloroethylene (PCE), have been measured in soil, groundwater, and indoor air at the Property. An SSDS was installed beneath the Property building and has been operating since April 30, 2007. The SSDS consists of 22 extraction points installed through the floor slab inside the building and connected to three manifold pipes; ten sub-slab soil vapor monitoring points; a skid-mounted 15-horsepower

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regenerative blower, gauges and controls; a 40-gallon water separator and high-level switch; and two 2,000 pound vapor phase granular activated carbon adsorbers operated in series.

To reduce the mass of VOCs in soil vapor at the 50 Tufts Street property and control its migration, GEI installed an SVE system in July and August 2007. The SVE system was installed in the northern and southern parking lots at the Property. The SVE system consists of seven slotted SVE extraction points connected underground to header pipes laid in trenches below the parking area. The collection headers daylight near the northwest and southwest corners of the building; the above ground header pipes are connected to the existing pipe manifold inside the blower enclosure. Soil vapor from the SVE headers combines with the flow from the SSDS headers and is treated with the granular activated carbon units, which treat the off-gas.

2. DATE AND NUMBER OF MONITORING EVENTS [310 CMR 40.0027(2)(B)]

2.1. Sub-Slab Depressurization System (SSDS)

Monitoring of the SSDS included (Fig. 3):

- Pressure and total VOC concentrations at each of the active SSDS extraction points (EP-W1 through EP-W8, EP-C1 through EPC9, and EP-E1 through EP-E5).
- Soil vapor pressure and VOC concentrations at each sub-slab monitoring point (SS3, SS4, and SS20 through SS27).
- Pressure and total VOC concentrations at each manifold header.
- Pressure and total VOC concentrations in the combined influent and effluent from the off-gas treatment system, and between carbon units (primary tank effluent).

Pressure measurements were taken using a manometer and VOC concentrations were measured using a photoionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene. A summary of monitoring results from system startup (April 30, 2007) through October 31, 2007 are summarized on Table 1. Monitoring logs and sampling checklists for October 2007 are in Attachment B, and graphs of the total VOC concentrations at the monitoring and extraction points are in Attachment C.

2.2. Soil Vapor Extraction (SVE) System

Monitoring of the SVE system included (Figs. 4a and 4b):

- Pressure and total VOC concentrations at each of the active SVE system extraction points (SVE-1 through SVE-7).
- Soil vapor pressure and total VOC concentrations at selected soil vapor monitoring points (SVT-MW201D, SVT-MW201S, SVT-MW202D, SVT-MW202S, SVT-1D through SVT-10D, SVT-12D, SVT-15D through 27D, SVT-3S, SVT-5S, SVT-8S, SVT-9S, SVT-11S, SVT-12S, SVT-14S SVT-16S, SVT-17S, SVT-20S, SVT-22S and SVT-25S).
- Pressure and total VOC concentrations at each manifold header.
- Combined influent and effluent from the off-gas treatment system and between carbon units conducted in conjunction with the SSDS monitoring program.

Pressure measurements were taken using a manometer and VOC concentrations were measured using a PID calibrated to 100 ppm isobutylene. A summary of monitoring results from system startup (August 22, 2007) through October 31, 2007 are summarized on Table 2, monitoring logs

for October 2007 are in Attachment B, and graphs of the total VOC concentrations at the monitoring and extraction points are in Attachment C.

2.3. Indoor and Outdoor Air Monitoring

Indoor and outdoor air samples were collected during the reporting period on October 4, 2007 using summa canisters. Samples were submitted to Accutest Laboratories of New England (Accutest) for laboratory analysis for selected chlorinated VOCs by Method TO-15. Results of the October 4, 2007 sampling, along with previous testing results, are summarized in Table 3.

2.4 Soil Disposal

Approximately 60 cubic yards of soil were excavated during the installation of the SVE system and stored on the Property in four, lined, and covered roll-offs. Two soil samples, Disp1 and Disp2, were submitted to Accutest for disposal criteria analyses. A copy of the laboratory analytical report is provided as Attachment D.

On September 12, 2007, TMC Services, Inc. transported the soil under a hazardous waste manifest to General Chemical Corporation (General Chemical) in Framingham, Massachusetts. The soil was then transferred to Stablex, Inc. (Stablex), in Blainville, Quebec, Canada for landfill disposal. Copies of the hazardous waste manifests associated with the transfer of soil to General Chemical were included in the November 9, 2007 IRA Status Report. GEI is awaiting receipt of the hazardous materials manifests associated with the acceptance of the soil by Stablex, Inc. When obtained, copies of the manifests will be provided to DEP.

3. EFFLUENT CONCENTRATIONS [310 CMR 40.0027(2)(C)]

Influent and effluent samples from the carbon treatment system were not collected for laboratory analysis during the monitoring period.

4. IDENTIFICATION OF DISCHARGES ABOVE PERMISSIBLE DISCHARGE CONCENTRATIONS [310 CMR 40.0027(2)(D)]

Off-gas treatment is required for the integrated SSDS and SVE system and it must remove 95% of the VOC mass present in the influent. Effluent testing by PID, the results of which are presented in Tables 1 and 2, indicate that the existing off-gas treatment system is removing greater than 95% of the VOC mass present in the influent air.

Off-gas is vented through two tanks each containing 2,000 pounds (lbs.) of granular activated carbon which operate in series with a primary tank receiving the untreated system influent, and a polish tank receiving the effluent from the primary tank.

Carbon tank change-outs occurred on October 4, 2007, and consisted of removing and drumming 2,000 lbs. of granular activated carbon from two spent tanks. Each tank was refilled with 2,000 lbs. of fresh granular activated carbon and system operation continued.

5. RECOVERY RATES AND/OR VOLUMES [310 CMR 40.0027(2)(E)]

The Active Remedial System's granular activated carbon recovers VOCs and some water moisture. The effluent VOC concentrations and air flow rates are presented in the monitoring logs in Attachment B, and in Tables 1 and 2.

6. DISCHARGE VOLUMES [310 CMR 40.0027(2)(F)]

The effluent VOC concentrations are in Tables 1 and 2, and in the monitoring logs in Attachment B, and in Tables 1 and 2. Air flow rates are in Attachment B.

7. DATE, LOCATION, TYPE AND VOLUME OF REMEDIAL ADDITIVES APPLICATIONS [310 CMR 40.0027(2)(G)]

No remedial additives have been applied as part of these Active Remedial Systems.

8. GROUNDWATER DATA [310 CMR 40.0027(2)(H)]

No groundwater data have been collected as part of these Active Remedial Systems.

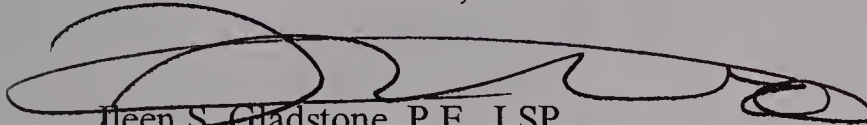
9. RELATED MAPS, GRAPHS OR DIAGRAMS [310 CMR 40.0027(2)(I)]

Related tables, maps and inspection logs are included as attachments and referenced in this report.

Please contact me at (781) 721-4012 or at igladstone@geiconsultants.com if you have any questions regarding this RMR No. 7b.

Very truly yours,

GEI CONSULTANTS, INC.



Iileen S. Gladstone, P.E., LSP
Vice President

MCE/ISG:jah

c: John Badey, UniFirst Corporation
Peter Mills, City of Somerville

Attachments:

Table 1:	Sub-Slab Depressurization System (SSDS) Monitoring Results – 50 Tufts Street
Table 2:	Soil Vapor Extraction System (SVE) Monitoring Results - 50 Tufts Street
Table 3:	Summary of Indoor and Outdoor Air Testing Results – 50 Tufts Street
Figure 1:	Site Location Map
Figure 2:	50 Tufts Street Site
Figure 3:	Piping and Equipment Layout for Sub-Slab Depressurization System
Figure 4a:	Soil Vapor Monitoring and Extraction Points (Northern Parking Lot and 60 Tufts Street)
Figure 4b:	Soil Vapor Monitoring and Extraction Points (Southern Parking Lot)
Attachment A:	BWSC105, BWSC105A and BWSC105B
Attachment B:	Weekly Inspection and Monitoring Logs for 50 Tufts Street
Attachment C:	Graphs of SSDS and SVE Total VOC Concentrations
Attachment D:	Laboratory Analytical Report, Soil Disposal, August 17, 2007



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Table 1
Sub-Slab Depressurization System (SSDS) Monitoring Results
50 Tufts Street
Somerville, Massachusetts

Date:	4/30/2007		5/1/2007		5/3/2007		5/4/2007		5/5/2007		5/7/2007		5/10/2007		5/14/2007		5/18/2007	
Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)
West Header	-4.59	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	-4.42	112	--	--	-4.48	72.5
Center Header	-4.63	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	-4.53	168	--	--	-4.59	137.4
East Header	-1.96	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	-1.94	507	--	--	-1.92	292
Primary Carbon Influent	-7.98	70	--	251	--	229	--	192	-0.94	169	--	201	-7.55	205	--	--	-8.18	153
Primary Carbon Effluent	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	<-10	2.1
System Discharge	6.3	0	--	0	--	0	--	0	6.41	0.8	--	0	4.5	1.4	--	--	5.85	2.8
EP-W1	--	--	--	--	--	--	--	--	--	--	--	--	-4.05	900	--	--	--	--
EP-W2	--	--	--	--	--	--	--	--	--	--	--	--	-3.35	186.9	--	--	--	--
EP-W3	--	--	--	--	--	--	--	--	--	--	--	--	-2.74	26.2	--	--	--	--
EP-W4	--	--	--	--	--	--	--	--	--	--	--	--	-2.06	8.2	--	--	--	--
EP-W5	--	--	--	--	--	--	--	--	--	--	--	--	-1.71	4.4	--	--	--	--
EP-W6	--	--	--	--	--	--	--	--	--	--	--	--	-1.79	13.3	--	--	--	--
EP-W7	--	--	--	--	--	--	--	--	--	--	--	--	-1.76	13.7	--	--	--	--
EP-W8	-1.94	--	--	--	--	--	--	--	--	--	--	--	-1.8	174	-1.6	-	--	--
EP-C1	--	--	--	--	--	--	--	--	--	--	--	--	-4.13	67.7	--	--	--	--
EP-C2	--	--	--	--	--	--	--	--	--	--	--	--	-4.13	440	--	--	--	--
EP-C3	--	--	--	--	--	--	--	--	--	--	--	--	-3.94	99	--	--	--	--
EP-C4	--	--	--	--	--	--	--	--	--	--	--	--	-3.73	2.16	--	--	--	--
EP-C5	--	--	--	--	--	--	--	--	--	--	--	--	-3.55	366	--	--	--	--
EP-C6	--	--	--	--	--	--	--	--	--	--	--	--	-3.31	10.7	--	--	--	--
EP-C7	--	--	--	--	--	--	--	--	--	--	--	--	-2.93	57.2	-2.64	-	--	--
EP-C8	-3.15	--	--	--	--	--	--	--	--	--	--	--	-3.13	69.9	--	--	--	--
EP-C9	-3.21	--	--	--	--	--	--	--	--	--	--	--	-3.17	162	--	--	--	--
EP-E1	--	--	--	--	--	--	--	--	--	--	--	--	-1.81	2.42	--	--	--	--
EP-E2	--	--	--	--	--	--	--	--	--	--	--	--	-1.8	72	--	--	--	--
EP-E3	--	--	--	--	--	--	--	--	--	--	--	--	-1.68	97.7	--	--	--	--
EP-E4	--	--	--	--	--	--	--	--	--	--	--	--	-1.71	23.4	--	--	--	--
EP-E5	-1.72	--	--	--	--	--	--	--	--	--	--	--	-1.71	4.4	-1.61	--	--	--
SS3	-0.29	--	--	--	--	--	--	--	--	--	--	--	-0.23	409	-0.255	--	--	--
SS4	-0.68	--	--	--	--	--	--	--	--	--	--	--	-0.58	875	-0.592	--	--	--
SS20	--	--	--	--	--	--	--	--	--	--	--	--	-0.12	--	-0.098	--	--	--
SS21	--	--	--	--	--	--	--	--	--	--	--	--	-0.52	--	-0.486	--	--	--
SS22	--	--	--	--	--	--	--	--	--	--	--	--	-0.54	--	-0.489	--	--	--
SS23	--	--	--	--	--	--	--	--	--	--	--	--	-0.31	--	-0.304	--	--	--
SS24	--	--	--	--	--	--	--	--	--	--	--	--	-0.38	--	-0.396	--	--	--
SS25	--	--	--	--	--	--	--	--	--	--	--	--	-0.81	--	-0.772	--	--	--
SS26	--	--	--	--	--	--	--	--	--	--	--	--	-0.51	--	-0.448	--	--	--
SS27	--	--	--	--	--	--	--	--	--	--	--	--	-0.18	--	-0.152	--	--	--

General Notes
1. The first day of SSDS operation was April 30, 2007.
2. VOC = volatile organic compound.
3. ppm = parts per million.
4. in. H₂O = inches water.
5. "--" = not measured.
6. NI = sample port not installed.
7. The soil vapor extraction (SVE) system was started up on August 22, 2007.
* Results obtained during SVE diagnostic test.

Table 1
Sub-Slab Depressurization System (SSDS) Monit
50 Tufts Street
Somerville, Massachusetts

Date:	5/25/2007		6/1/2007		6/3/2007		6/8/2007		6/12/2007		6/19/2007		6/26/2007		7/3/2007		7/10/2007	
Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)
West Header	-4.37	53	-3.6	84.9	--	--	-4.85	56.5	-4.51	56.4	-4.55	63.7	-4.81	15.3	-4.65	73	-4.77	16.7
Center Header	-4.42	230.1	-3.65	180.4	--	--	-4.89	112.9	-4.57	116.1	-4.59	127.1	-4.87	40.3	-4.84	157.3	-4.87	33.8
East Header	-1.97	306	-1.64	593	--	--	-2.12	219.4	-1.98	296	-1.97	217.4	-2.02	64.8	-1.93	332	-1.98	66.8
Primary Carbon Influent	-7.57	126.7	-6.23	170.4	--	139	-8.57	98.6	-7.93	92.3	-8.01	100.5	-8.44	27.6	-8.45	138	-8.51	31.2
Primary Carbon Effluent	<-10	40.3	--	--	--	43	18.05	140	--	--	--	--	10.31	0	10.4	4.6	10.33	13.7
System Discharge	5.13	0.9	4.14	0	--	0	--	0	--	0.5	--	0.3	--	0	--	0	--	0
EP-W1	--	--	--	--	--	--	--	--	-4.207	365	-4.134	296	-4.441	157.7	--	--	--	--
EP-W2	--	--	--	--	--	--	--	--	-3.329	102.6	-3.323	111.9	-3.498	30.5	--	--	--	--
EP-W3	--	--	--	--	--	--	--	--	-2.697	11.3	-2.641	15.1	-2.801	3.1	--	--	--	--
EP-W4	--	--	--	--	--	--	--	--	-1.988	4.3	-1.937	5.8	-2.034	0.9	--	--	--	--
EP-W5	--	--	--	--	--	--	--	--	-1.632	1.6	-1.568	2	-1.661	0	--	--	--	--
EP-W6	--	--	--	--	--	--	--	--	-1.734	1.4	-1.678	1.8	-1.757	0	--	--	--	--
EP-W7	--	--	--	--	--	--	--	--	-1.675	4.1	-1.627	4	-1.713	0.5	--	--	--	--
EP-W8	--	--	--	--	--	--	--	--	-1.714	47.4	-1.669	53.4	-1.749	11.3	--	--	--	--
EP-C1	--	--	--	--	--	--	--	--	-4.192	17.8	-4.191	23.2	-4.453	5.4	--	--	--	--
EP-C2	--	--	--	--	--	--	--	--	-4.203	157.2	-4.22	140.7	-4.547	36.2	--	--	--	--
EP-C3	--	--	--	--	--	--	--	--	-3.985	80.9	-3.987	102.4	-4.238	28.6	--	--	--	--
EP-C4	--	--	--	--	--	--	--	--	-3.773	1653	-3.734	500	-3.994	273	--	--	--	--
EP-C5	--	--	--	--	--	--	--	--	-3.565	180.4	-3.55	177.9	-3.79	60.5	--	--	--	--
EP-C6	--	--	--	--	--	--	--	--	-3.287	2.8	-3.272	4.1	-3.494	0.3	--	--	--	--
EP-C7	--	--	--	--	--	--	--	--	-2.768	33.5	-2.767	44.1	-2.913	12.9	--	--	--	--
EP-C8	--	--	--	--	--	--	--	--	-3.082	54.4	-3.071	67.9	-3.224	14.4	--	--	--	--
EP-C9	--	--	--	--	--	--	--	--	-3.151	88.5	-3.127	101.2	-	-	--	--	--	--
EP-E1	--	--	--	--	--	--	--	--	-1.856	1179	-1.841	500	-1.903	111	--	--	--	--
EP-E2	--	--	--	--	--	--	--	--	-1.849	51	-1.813	53.5	-1.867	11.7	--	--	--	--
EP-E3	--	--	--	--	--	--	--	--	-1.738	10.2	-1.712	12.4	-1.761	1.8	--	--	--	--
EP-E4	--	--	--	--	--	--	--	--	-1.768	7	-1.735	9.5	-1.77	1.2	--	--	--	--
EP-E5	--	--	--	--	--	--	--	--	-1.757	2.3	-1.725	2.1	-1.779	0	--	--	--	--
SS3	--	--	--	--	--	--	--	--	-0.272	170.9	-0.287	114.3	-0.323	27.9	--	--	--	--
SS4	--	--	--	--	--	--	--	--	-0.773	1.6	-0.776	-	-0.827	25.5	--	--	--	--
SS20	--	--	--	--	--	--	--	--	-0.096	2158	-0.103	500	-0.115	434	--	--	--	--
SS21	--	--	--	--	--	--	--	--	-0.598	471	-0.598	259.7	-0.635	76.5	--	--	--	--
SS22	--	--	--	--	--	--	--	--	-0.572	1010	-0.573	335	-0.626	73.9	--	--	--	--
SS23	--	--	--	--	--	--	--	--	-0.345	17.6	-0.328	58.9	-0.367	12.9	--	--	--	--
SS24	--	--	--	--	--	--	--	--	-0.424	1.2	-0.425	0.4	-0.466	0.2	--	--	--	--
SS25	--	--	--	--	--	--	--	--	-0.803	532	-0.783	257.7	-0.821	66.5	--	--	--	--
SS26	--	--	--	--	--	--	--	--	-0.497	3.2	-0.472	1.9	-0.539	0.2	--	--	--	--
SS27	--	--	--	--	--	--	--	--	-0.179	45.2	-0.178	37.5	-0.195	7.9	--	--	--	--

General Notes
1. The first day of SSDS operation was April 30, 2007.
2. VOC = volatile organic compound.
3. ppm = parts per million.
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7. The soil vapor extraction (SVE) system was started up on August 22, 2007.
* Results obtained during SVE diagnostic test.

Table 1
Sub-Slab Depressurization System (SSDS) Monit
50 Tufts Street
Somerville, Massachusetts

Date:	7/17/2007		7/24/2007		7/31/2007*		7/31/2007		8/7/2007		8/19/2007		8/20/2007		8/21/2007		8/22/2007	
Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)
West Header	-4.55	45.1	-4.55	87.6	-5.86	16	-4.7	43.5	-4.65	50.3	-4.3	61.1	-4.83	56	-4.72	46	-3.59	46
Center Header	-4.65	101.8	-4.58	155.1	-6.08	31.9	-4.93	141.1	-4.83	136.2	-4.5	157	-4.58	131	-4.54	113	-3.61	118
East Header	-1.88	195.6	-1.89	266	-3.75	55.9	-1.85	171.7	-1.78	222.2	-1.4	239.6	-1.87	218	-1.86	196	-3.63	176
Primary Carbon Influent	-8.13	82.2	-8.21	127.5	-9.56	29.3	-8.37	89.7	-8.39	100.7	-8.2	114	-6.25	119	-6.18	104	-5.7	234
Primary Carbon Effluent	--	--	--	--	--	--	--	--	--	--	9.5	18.1	--	21.9	10.17	28	--	19.4
System Discharge	--	0.2	--	1.1	--	0	--	0	--	0	-	0	--	0	--	0	--	0
EP-W1	--	--	-4.142	498	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-W2	--	--	-3.267	145.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-W3	--	--	-2.55	107.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-W4	--	--	-1.856	10.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-W5	--	--	-1.457	3.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-W6	--	--	-1.594	3.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-W7	--	--	-1.547	5.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-W8	--	--	-1.557	55.3	--	--	--	--	--	--	--	--	-1.553	-	-1.518	-	-1.381	-
EP-C1	--	--	-4.239	213	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-C2	--	--	-4.265	127.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-C3	--	--	-4.003	111.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-C4	--	--	-3.789	3000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-C5	--	--	-3.596	188.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-C6	--	--	-3.27	5.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-C7	--	--	-2.725	59.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-C8	--	--	-3.071	65.4	--	--	--	--	--	--	--	--	-2.954	-	-2.936	-	-2.712	-
EP-C9	--	--	-3.121	119	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-E1	--	--	-1.754	2000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-E2	--	--	-1.71	62.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-E3	--	--	-1.603	67.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-E4	--	--	-1.635	11.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EP-E5	--	--	-1.631	3.6	--	--	--	--	--	--	--	--	-1.583	-	-1.553	--	-1.603	--
SS3	--	--	-0.294	64.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SS4	--	--	-0.835	163	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SS20	--	--	-0.125	3000	--	--	--	--	--	--	--	--	-0.098	--	-0.101	--	-0.094	--
SS21	--	--	-0.607	589	--	--	--	--	--	--	--	--	-0.585	--	-0.597	--	-0.568	--
SS22	--	--	-0.595	1200	--	--	--	--	--	--	--	--	-0.549	--	-0.577	--	-0.528	--
SS23	--	--	-0.368	61.6	--	--	--	--	--	--	--	--	-0.339	--	-0.332	--	-0.321	--
SS24	--	--	-0.446	2	--	--	--	--	--	--	--	--	-0.443	--	-0.443	--	-	--
SS25	--	--	-0.78	265	--	--	--	--	--	--	--	--	-0.738	--	-0.741	--	-0.709	--
SS26	--	--	-0.475	3	--	--	--	--	--	--	--	--	-0.447	--	-0.437	--	-	--
SS27	--	--	-0.184	103.5	--	--	--	--	--	--	--	--	-0.169	--	-0.168	--	-0.176	--

- General Notes**
1. The first day of SSDS operation was April 30, 2007.
 2. VOC = volatile organic compound.
 3. ppm = parts per million.
 4. in. H₂O = inches water.
 5. "--" = not measured.
 6. NI = sample port not installed.
 7. The soil vapor extraction (SVE) system was started up on August 22, 2007.
- * Results obtained during SVE diagnostic test.

Table 1
Sub-Slab Depressurization System (SSDS) Monit
50 Tufts Street
Somerville, Massachusetts

Date:	8/23/2007		8/24/2007		8/28/2007		9/4/2007		9/11/2007		9/18/2007		9/25/2007		10/2/2007	
Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)
West Header	-4.37	41	-4.36	--	-4.27	38	-4.28	60	-4.15	50.5	-4.35	49	-4.24	36	-4.69	37.1
Center Header	-4.3	94	-4.24	--	-4.15	72	-4.23	113	-4.07	90.9	-4.29	96	-4.17	70	-4.62	72.5
East Header	-2.01	160	-2.03	--	-1.92	125	-2.13	199	-2.05	157.1	-1.96	159	-1.96	136	-2.06	108
Primary Carbon Influent	-5.81	208	-5.78	--	-5.68	158	-5.74	209	-5.56	175.9	-5.82	178	-5.69	136	-6.41	121
Primary Carbon Effluent	8.61	36	--	--	--	--	--	52	10.89	0	11.12	9	10.52	51	--	52
System Discharge	--	0	--	--	--	0	--	0.2	--	0	--	0	-	0	--	0
EP-W1	-3.993	228	--	--	-3.814	225	-3.784	266	-3.789	950	-3.751	224	-3.633	232	-4.125	188
EP-W2	-3.109	85	--	--	-3.016	115	-2.962	117	-2.913	170	-2.873	85	-2.864	89.4	-3.128	74
EP-W3	-2.348	19	--	--	-2.305	38	-2.235	26	-2.179	48	-2.162	27	-2.163	23.6	-2.319	23.1
EP-W4	-1.712	3	--	--	-1.676	5	-1.611	2.5	-1.569	14.4	-1.585	0	-1.584	0.3	-1.663	0.2
EP-W5	-1.315	0	--	--	-1.308	15	-1.247	1	-1.178	0.3	-1.219	0	-1.221	0	-1.271	0
EP-W6	-1.471	0	--	--	-1.411	8	-1.382	1	-1.329	0	-1.343	0	-1.345	0	-1.434	0
EP-W7	-1.417	0	--	--	-1.376	5	-1.345	2	-1.279	0.5	-1.287	0	-1.308	0.2	-1.378	0.3
EP-W8	-1.447	21	-1.44	--	-1.408	20	-1.364	20	-1.298	17.2	-1.316	11	-1.331	11	-1.403	9.7
EP-C1	-3.896	11	--	--	-3.762	30	-3.733	10.3	-3.724	86	-3.702	8	-3.591	10.5	-4.037	10.5
EP-C2	-3.942	64	--	--	-3.786	83	-3.754	80	-3.753	344	-3.726	70	-3.637	66	-4.092	56
EP-C3	-3.676	72	--	--	-3.512	90	-3.525	102	-3.507	451	-3.476	55	-3.398	76.7	-3.804	48
EP-C4	-3.494	2220	--	--	-3.352	1910	-3.349	1700	-3.335	2500	-3.252	1330	-3.215	1230	-3.558	--
EP-C5	-3.282	122	--	--	-3.137	128	-3.14	148	-3.131	145.3	-3.109	115	-3.085	120.1	-3.398	87
EP-C6	-3.039	0	--	--	-2.896	8	-2.92	1.3	-2.867	1.3	-2.869	0	-2.772	0	-3.108	--
EP-C7	-2.562	26	--	--	-2.424	15	-2.457	15	-2.419	10	-2.383	8	-2.381	5.3	-2.587	4.8
EP-C8	-2.836	24	--	--	-2.712	18	-2.736	16.2	-2.665	12.2	-2.638	7.5	-2.634	6.5	-2.897	5.5
EP-C9	-2.875	42	-2.8	--	-2.743	20	-2.775	10	-2.707	7	-2.672	4.5	-2.662	3.8	-2.933	3.7
EP-E1	-1.843	528	--	--	-1.815	480	-1.923	560	-1.976	1000	-1.744	460	-1.761	457	-1.872	323
EP-E2	-1.822	26	--	--	-1.755	43	-1.886	33	-1.865	109	-1.691	21	-1.717	22.1	-1.818	17.2
EP-E3	-1.69	5	--	--	-1.633	13	-1.751	4.3	-1.743	9	-1.556	2	-1.591	1.5	-1.658	1.5
EP-E4	-1.708	3	--	--	-1.641	4	-1.759	3.2	-1.724	2.5	-1.584	1	-1.613	1.2	-1.687	1.1
EP-E5	-1.697	0	--	--	-1.653	2.5	-1.768	1	-1.712	0.5	-1.594	0	-1.623	0	-1.683	0
SS3	-0.548	79	--	--	--	--	-0.259	121	-0.284	2000	-0.287	64	-0.568	107	--	--
SS4	-0.773	16	--	--	--	--	-0.739	107	-0.76	1700	-0.724	107	-0.716	87	-0.734	--
SS20	-0.103	6100	-0.13	--	-0.104	5260	-0.117	1800	-0.119	4000	-0.112	1200	-0.107	1600	-0.109	--
SS21	-0.594	439	--	--	-0.588	610	-0.611	572	-0.568	1200	-0.475	342	-0.587	390	-0.497	--
SS22	-0.543	3	--	--	-0.533	18	-0.528	0.5	-0.487	0	-0.531	0	-0.502	209	-0.517	--
SS23	-0.324	29	--	--	-0.321	53	-0.328	42	-0.294	41.1	-0.312	27	-0.315	31.9	-0.315	--
SS24	-0.429	0	--	--	-0.414	23	-0.414	0.5	-0.401	0	-0.398	0	-0.417	0	-0.436	--
SS25	-0.742	197	-0.72	--	-0.709	68	-0.719	229	-0.705	252	-0.697	192	-0.717	182	-0.765	--
SS26	-0.431	3	--	--	-0.442	15	-0.42	1.2	-0.396	0	-0.364	0	-0.408	0	-0.397	--
SS27	-0.174	11	-0.19	--	-0.18	25	-0.167	1.7	-0.17	14.6	-0.166	9	-0.167	10.1	-0.181	--

General Notes

1. The first day of SSDS operation was April 30, 2007.
 2. VOC = volatile organic compound.
 3. ppm = parts per million.
 4. in. H₂O = inches water.
 5. "--" = not measured.
 6. NI = sample port not installed.
 7. The soil vapor extraction (SVE) system was started up on August 22, 2007.
- * Results obtained during SVE diagnostic test.

Table 2
Soil Vapor Extraction System (SVE) Monitoring Results
50 Tufts Street
Somerville, Massachusetts

Date:	8/20/2007		8/21/2007		8/22/2007		8/23/2007		8/24/2007		8/28/2007		9/4/2007		9/11/2007		9/18/2007		9/25/2007		10/2/2007		10/16/2007		10/23/2007		10/30/2007	
Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)	Pressure (in. H ₂ O)	VOC (ppm)
North Header	--	--	--	--	-4.28	8200	-5.11	5800	-4.46	-	-4.32	2165	-4.41	2278	-4.26	1750	-4.47	1760	-4.31	931	-4.78	1134	-4.09	1140	-4.34	940	-4.09	802
South Header	-4.94	684	-4.93	470	-4.31	467	-5.12	404	-4.44	-	-4.37	277	-4.44	387	-4.27	486	-4.48	308	-4.32	177	-4.83	225	-4.16	188	-4.33	244	-4.11	152.5
Primary Carbon Influent	-6.25	119	-6.18	104	-5.7	234	-6.68	208	-5.78	-	-5.68	158	-5.74	209	-5.56	175.9	-5.82	178	-5.69	136	-6.41	121	-5.54	120	-5.67	94	-5.51	95.5
Primary Carbon Effluent	--	21.9	--	10.17	--	19.4	8.61	36	--	--	--	0	--	52	10.89	0	11.12	9	10.52	51	--	52	15.16	0.063	15.68	6.1	15.85	12.5
System Discharge	--	0	--	0	--	0	--	0	--	--	--	0	--	0.2	NM	0	NM	0	--	0	--	0	--	0	NM	0	NM	0
SVE-1	NI	NI	NI	NI	-4.34	157	-4.96	89	--	--	-4.305	30	-4.31	22	-4.387	184	-4.3	12	-4.16	11.8	-4.72	7.1	-4.06	9.5	-4.23	9	-4.05	6.4
SVE-2	NI	NI	NI	NI	-4.31	428	-4.96	276	--	--	-4.307	55	-4.32	49	-4.345	162	-4.31	22	-4.12	22.5	-4.72	13.1	-4.03	12	-4.22	11	-4.01	8.5
SVE-3	NI	NI	NI	NI	-4.38	6450	-4.97	2300	--	--	-4.267	630	-4.28	621	-4.33	491	-4.27	426	-4.11	479	-4.73	308	-4.01	405	-4.24	297	-4.01	297
SVE-4	NI	NI	NI	NI	-4.32	1009	-4.98	465	--	--	-4.315	726	-4.3	510	-4.35	340	-4.31	224	-4.15	213	-4.73	133	-4.05	150	-4.21	110	-4.03	109.5
SVE-5	NI	NI	NI	NI	-4.35	8000	-5.01	4000	--	--	-4.318	4040	-4.29	1500	-4.36	1200	-4.31	1100	-4.16	1519	-4.71	1093	-4.02	1900	-4.22	1460	-4.07	1300
SVE-6	-4.98	197	-4.91	152	-4.39	139	-4.98	121	--	--	-4.366	72	-4.39	102	-4.46	312	-4.44	112	-4.25	87	-4.82	73	-4.11	78	-4.28	86	-4.11	84.4
SVE-7	-4.98	577	-4.97	263	-4.37	368	-4.97	266	--	--	-4.376	165	-4.41	320	-4.46	790	-4.45	258	-4.24	330	-4.78	181	-4.13	197	-4.31	172	-4.09	210
SVT-MW201D	--	--	--	--	--	--	--	--	--	--	-0.045	0	-0.049	2	-0.065	20	-0.048	1	-0.052	1.7	-0.049	0	-0.051	0.7	-0.075	0.7	-0.042	0.8
SVT-MW201S	--	--	--	--	--	--	--	--	--	--	0	0	-0.004	3.5	-0.004	15	-0.005	2	0	1.8	-0.004	0.3	-0.003	0	-0.007	1.2	-0.005	0.1
SVT-MW202D	--	--	--	--	--	--	--	--	--	--	-0.013	0	-0.012	0.5	-0.019	0	-0.018	0	-0.008	0	-0.006	0	-0.018	0	-0.041	0	-0.019	0
SVT-MW202S	--	--	--	--	--	--	--	--	--	--	0	0	0	1.5	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0
SVT-1D	--	--	--	--	-0.32	1.4	-0.36	28	--	--	-0.6	2.5	-0.327	7.5	-0.321	196	-1.405	2	-0.226	0	-0.34	1	-0.298	1.5	-0.337	2.7	-0.182	0.9
SVT-2D	--	--	--	--	-0.73	19.4	-0.81	38	--	--	-1.1	5	-0.715	10.7	-0.753	124	-0.712	1	-0.669	0	-0.744	0.1	-0.66	1.2	-0.703	2	-0.671	0
SVT-3D	--	--	--	--	-0.14	5	0.301	4	--	--	0.36	12.4	-0.058	22	-0.149	15	-0.092	0	-0.096	9.1	-0.101	5	-0.091	0	-0.107	0.3	-0.1	0
SVT-3S	--	--	--	--	-0.31	40	-0.749	24	--	--	-0.07	7.5	-0.074	11.6	-0.095	3.2	-0.085	4	-0.286	3.8	-0.083	1.4	-0.077	1.6	-0.091	2.8	-0.083	0.1
SVT-4D	--	--	--	--	--	-	0.138	38	--	--	0.25	17.5	-0.065	21	-0.107	16	-0.092	1	-0.074	7.5	-0.088	7	-0.076	0	-0.102	0	-0.066	0
SVT-5D	--	--	--	--	-1.46	7.4	-1.736	23	--	--	-1.49	0	-1.443	30	-1.594	105	-1.517	11	-1.358	12.1	-1.547	1.7	-1.354	5.6	-1.382	0.9	-1.391	4.4
SVT-5S	--	--	--	--	-0.52	129	-0.635	42	--	--	-0.54	2.5	-0.523	11.7	-0.703	124	-0.636	5	-0.545	5.2	-0.576	1.1	-0.578	2.7	-0.648	5.1	-0.624	2.1
SVT-6D	--	--	--	--	--	--	-1.257	248	--	--	-1.19	53	-1.187	67	-1.351	44	-1.217	13	-1.141	25.8	-1.296	20	-1.135	9	-1.209	12	-1.155	8.6
SVT-7D	--	--	--	--	--	--	-0.027	4	--	--	-0.025	2.5	-0.03	1.3	-0.017	0	-0.032	1	-0.022	0.2	-0.024	0.1	-0.02	0	-0.017	0.2	-0.021	0
SVT-8D	--	--	--	--	--	--	-1.98	1850	--	--	-1.731	541	-0.18	196	-1.827	7000	-1.642	116	-1.568	199	-1.764	189	-1.465	0.8	-1.325	79	-1.267	0
SVT-8S	--	--	--	--	--	--	-0.21	600	--	--	-0.183	180	-1.697	734	-0.258	1050	-0.214	707	-0.171	534	-0.201	292	-0.18	645	-0.212	744	-0.194	610
SVT-9D	--	--	--	--	-0.79	1500	-0.805	1370	--	--	-0.778	830	-0.769	1000	-1.003	1000	-0.836	1173	-0.716	933	-0.859	950	-0.76	2034	-0.724	1480	-0.823	1230
SVT-9S	--	--	--	--	-0.53	2500	-0.31	2350	--	--	-0.695	2029	-0.285	1300	-1.102	928	-1.011	632	-0.347	877	-0.411	800	-0.554	545	-0.362	1050	-0.055	1050
SVT-10D	--	--	--	--	--	--	-0.01	5	--	--	0.394	38	0.11	4	-0.016	0	--	1	-0.008	2.2	--	--	--	--	--	--	--	--
SVT-11S	--	--	--	--	--	--	-0.008	1.3	--	--	-0.008	35	-0.007	0.5	-0.048	0	--	0	-0.005	0	--	--	--	--	--	--	--	--
SVT-12D	--	--	--	--	--	--	-0.019	1.3	--	--	-0.021	40	-0.008	3	-0.161	5	-0.125	6	--	--	--	--	--	--	--	--	--	--
SVT-12S	--	--	--	--	--	--	-0.009	1.3	--	--	-0.01	38	0.314	8	-0.09	0	--	1.3	--	0	--	--	--	--	--	--	--	--
SVT-14S	--	--	--	--	--	--	-0.004	98	--	--	-0.006	162	-0.003	148	-0.008	115	-0.005	117	-0.005	24.6	--	--	--	--	--	--	--	--
SVT-15D	--	--	--	--	--	--	-0.013	1.3	--	--	-0.015	0	-0.013	1.5	-0.013	0	-0.015	0	-0.014	0	--	--	--	--	--	--	--	--
SVT-16D	--	--	--	--	--	--	-0.367	6	--	--	-0.305	18	-0.221	29	-0.01	36	-0.155	21	-0.219	14	--	15	-0.051	22	0.287	23	-0.059	8.5
SVT-16S	--	--	--	--	--	--	-0.003	36	--	--	-0.007	33	-0.287	90	-0.009	73	0	30	-0.18	47	-0.005	47	0	39	0	41	-0.005	21.3
SVT-17D	--	--	--	--	--	--	--	--	--	--	0.68	30	0.41	53	-0.006	114	0	41	-0.011	38	0	28	0.004	34	0	46	0	52
SVT-17S	--	--	--	--	--	--	--	--	--	--	0.006	33	0	45	-0.005	45	0	35	-0.007	31	0	22	0	18	0	29	0	12.2
SVT-18D	--	--	--	--	--	--	--	--	--	--	0.006	68	0.004	123	0	137	0	164	0	147	--	--	--	--	--	--	--	--
SVT-19D	--	--	--	--	--	--	0.12	270	--	--	-0.011	190	-0.007	266	-0.012	420	0	441	-0.007	291	-0.007	265	0	320	-0.004	210	-0.008	222
SVT-20D	--	--	--	--	--	--	0	50	--	--	0.003	30	0	33	0	91	0	72	0	39	--	--	--	--	0.003	36	0	38
SVT-20S	--	--	--	--	--	--	0	36	--	--	0	26	0	29	0	70	0	48	0	23	--	--	--	--	0	19	0	20
SVT-21D	--	--	--	--	--	--	--	--	--	--	0.004	50	0	87	-0.002	125	0	101	0.36	79	--	--	--	--	--	--	--	--
SVT-22D	--	--	--	--	--	--	-0.119	290	--	--	-0.181	208	-0.185	140	-0.264	870	-0.209	141	-0.17	99	-0.194	92	-0.161	175	0.221	831	-0.166	606
SVT-22S	--	--	--	--	--	--	-0.003	86	--	--	-0.005	60	-0.173	55	-0.005	163	0	11	-0.15	6	-0.045	50	-0.004	45	-0.003	55	-0.003	36
SVT-23D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NM	0.234	27	0.34	40	--	--	--	--	--	--	--	--
SVT-24D	--	--	--	--	--	--	--	--	--	--	0	23	0	28	0	76	0	49	0	33	--	--	--	--	--	--	--	--
SVT-25D	--	--	--	--	--	--	--	--	--	--	--	--	0	30	0	34	0	28	--	--	--	--	--	--	--	--	--	--
SVT-25S	--	--	--	--	--	--	--	--	--	--	--	--	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
SVT-26D	--	--	--	--	--	--	--	--	--	--	--	--	0	0.6	0	7	0	0	--	--	--	--	--	--	--	--	--	--
SVT-27D	--	--	--	--	--	--	--	--	--	--	--	--	0.004	0.4	0	0	0.006	0	--	--	--	--	--	--	--	--	--	--

- General Notes**
1. The SVE system was started up on August 22, 2007.
 2. VOC = volatile organic compound.
 3. ppm = parts per million.
 4. in. H₂O = inches water.
 5. "--" = not measured.
 6. Header readings on 8/23/07 were taken with one carbon tank in series. All monitoring point readings were taken with two carbon tanks in series.
 7. SVT monitoring points listed on 9/11/07 were measured on 9/12/07 due to rain.
 8. NI = not installed.
 9. South header online August 20, 2007.

Table 3
Summary of Indoor and Outdoor Air Testing Results
50 Tufts Street
Somerville, MA

Sample Location: Sample Name: Sample Date: Collected By: Units:		North Parking Lot										Northwest Warehouse										North Office									
		04516-50T-NP		04516-NP		045162-NP		04516-50T-NP		04516-50T-NP		04516-50T-NW		04516-NW		045162-NW		04516-50T-NW		04516-50T-NW		04516-50T-NO		04516-NO		045162-NO		04516-50T-NO		04516-50T-NO	
		5/1/07		5/14/07		6/28/07		8/28/07		10/4/07		5/1/07		5/14/07		6/28/07		8/28/07		10/4/07		5/1/07		5/14/07		6/28/07		8/28/07		10/4/07	
		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI	
		µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv
Analyte	Method																														
Volatile Organic Compounds (VOCs)	TO-15																														
Carbon tetrachloride		0.75 J	0.12 J	<1.3	<0.20	<1.3	<0.20	0.63 J	0.10 J	<1.3	<0.20	0.75 J	0.12 J	<1.3	<0.20	0.69 J	0.11 J	0.69 J	0.11 J	<1.3	<0.20	0.69 J	0.11 J	<1.3	<0.20	0.61 J	0.097 J	0.63 J	0.10 J	<1.3	<0.20
Tetrachloroethylene (PCE)		1.8	0.26	7.5	1.1	12 G	1.7 G	14	2	7.5	1.1	33	4.8	11	1.6	15 G	2.2 G	45	6.6	12	1.8	34	5.0	6.4	0.94	8.8 G	1.3 G	8.8	1.3	4.3	0.64
1,1,1-Trichloroethane		0.38 J	0.070 J	0.98 J	0.18 J	2.0	0.36	2	0.36	1.2	0.22	2.6	0.48	<1.1	<0.20	0.60 J	0.11 J	4	0.73	<1.1	<0.20	3.0	0.55	<1.1	<0.20	0.87 J	0.16 J	0.93 J	0.17 J	<1.1	<0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	1.6	0.30	1.60	0.29	0.75 J	0.14 J	4.1	0.76	<1.1	<0.20	<1.1	<0.20	2.8	0.53	<1.1	<0.20	5.4	1.0	<1.1	<0.20	0.70 J	0.13 J	0.91 J	0.17 J	<1.1	<0.20

- General Notes:**
- 1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
 - 2. µg/m³ = micrograms per cubic meter.
 - 3. ppbv = parts per billion by volume.
 - 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
 - G The reported result is estimated due to laboratory duplicate precision outside control limits.
 - P The reported result is estimated due to field duplicate precision outside control limits.

Table 3
Summary of Indoor and Outdoor Air Testing Results
50 Tufts Street
Somerville, MA

Sample Location: Sample Name: Sample Date: Collected By: Units:		South Office										North Central Warehouse										South Garage									
		04516-50T-SO		04516-SO		045162-SO		04516-50T-SO		04516-50T-SO		04516-50T-NC		04516-NC		045162-NC		04516-50T-NC		04516-50T-NC		04516-50T-GA		04516-GA		045162-GA		04516-50T-GA		04516-50T-GA	
		5/1/07		5/14/07		6/28/07		8/28/07		10/4/07		5/1/07		5/14/07		6/28/07		8/28/07		10/4/07		5/1/07		5/14/07		6/28/07		8/28/07		10/4/07	
		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI	
		µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv
Analyte	Method																														
Volatile Organic Compounds (VOCs)	TO-15	0.75 J	0.12 J	<1.3	<0.20	0.69 J	0.11 J	0.61 J	0.097 J	<1.3	<0.20	0.75 J	0.12 J	<1.3	<0.20	0.60 J	0.096 J	0.59 J	0.093 J	<1.3	<0.20	0.75 J	0.12 J	<1.3	<0.20	0.69 J	0.11 J	0.69 J	0.11 J	<1.3	<0.20
Carbon tetrachloride		38	5.6	14	2.0	18 G	2.7 G	15.0	2.2	5.5	0.81	47	7.0	30	4.4	16 G	2.3 G	69.2	10.2	5.5	0.81	50	7.3	26	3.9	22 G	3.2 G	79.3	11.7	6.2	0.91
Tetrachloroethylene (PCE)		1.9	0.34	<1.1	<0.20	0.55 J	0.10 J	1.4	0.25	<1.1	<0.20	1.4	0.25	<1.1	<0.20	<1.1	<0.20	3.7	0.67	<1.1	<0.20	1.5	0.28	<1.1	<0.20	<1.1	<0.20	5.2	0.95	<1.1	<0.20
1,1,1-Trichloroethane		3.4	0.64	<1.1	<0.20	0.81 J	0.15 J	1.4	0.26	<1.1	<0.20	2.0	0.37	<1.1	<0.20	<1.1	<0.20	3.4	0.63	<1.1	<0.20	2.4	0.44	<1.1	<0.20	<1.1	<0.20	4.4	0.82	<1.1	<0.20
Trichloroethylene (TCE)																															

- General Notes:**
- Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
 - µg/m³ = micrograms per cubic meter.
 - ppbv = parts per billion by volume.
 - "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
 - G The reported result is estimated due to laboratory duplicate precision outside control limits.
 - P The reported result is estimated due to field duplicate precision outside control limits.

Table 3
Summary of Indoor and Outdoor Air Testing Results
50 Tufts Street
Somerville, MA

Sample Location: Sample Name: Sample Date: Collected By: Units:		South Parking Lot										South Central Warehouse										Indoor Air Duplicate of South Central Warehouse							
		04516-50T-SP 5/1/07 GEI		04516-SP 5/14/07 GEI		045162-SP 6/28/07 GEI		04516-50T-SP 8/28/07 GEI		04516-50T-SP 10/4/07 GEI		04516-50T-SC 5/1/07 GEI		04516-SC 5/14/07 GEI		045162-SC 6/28/07 GEI		04516-50T-SC 8/28/07 GEI		04516-50T-SC 10/4/07 GEI		04516-50T-IA 5/1/07 GEI		04516-IA 5/14/07 GEI		045162-IA 6/28/07 GEI		04516-50T-IA 8/28/07 GEI	
		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	Method																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		0.69 J	0.11 J	0.63 J	0.10 J	<1.3	<0.20	0.69 J	0.11 J	<1.3	<0.20	< 1.3	< 0.20	<1.3	<0.20	0.69 J	0.11 J	0.75 J	0.12 J	<1.3	<0.20	0.69 J	0.11 J	0.63 J	0.10 J	<1.3	<0.20	0.69 J	0.11 J
Tetrachloroethylene (PCE)		3.7	0.54	2.8	0.4	1.8 G	0.26 G	160	23.60	1.3 J	0.19 J	43 P	6.4 P	23 P	3.4 P	18 GP	2.6 GP	66.0	9.7	6.0	0.88	8.1 P	1.2 P	6.8 P	1.0 P	10 GP	1.5 GP	63	9.3
1,1,1-Trichloroethane		< 1.1	< 0.20	<1.1	<0.20	<1.1	<0.20	16	2.9	<1.1	<0.20	1.3	0.24	<1.1	<0.20	0.50 J	0.092 J	4.7	0.87	<1.1	<0.20	1.2	0.22	<1.1	<0.20	<1.1	<0.20	4.4	0.81
Trichloroethylene (TCE)		< 1.1	< 0.20	<1.1	<0.20	<1.1	<0.20	12	2.2	<1.1	<0.20	2.0	0.37	<1.1	<0.20	<1.1	<0.20	3.8	0.7	<1.1	<0.20	1.6	0.29	<1.1	<0.20	<1.1	<0.20	3.6	0.67

- General Notes:**
- Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
 - µg/m³ = micrograms per cubic meter.
 - ppbv = parts per billion by volume.
 - "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- G The reported result is estimated due to laboratory duplicate precision outside control limits.
- P The reported result is estimated due to field duplicate precision outside control limits.

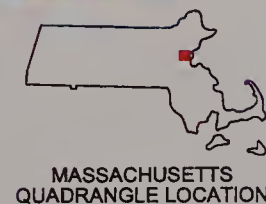


Geotechnical
Environmental and
Water Resources
Engineering





0 1000 2000 4000 6000
SCALE, FEET



This Image provided by MassGIS is taken from
U.S.G.S. Topographic 7.5 X 15 Minute Series
Boston North, MA Quadrangle, 1985.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 3 Meters.

Remedial Monitoring Report No. 7b
50 Tufts Street
Somerville, Massachusetts
UniFirst Corporation
Wilmington, Massachusetts



SITE LOCATION MAP

Project 04516-2

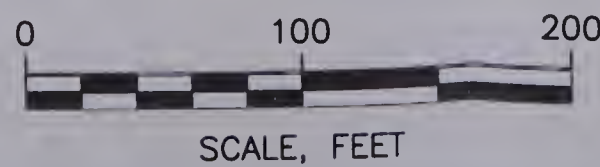
November 2007

Fig. 1



GENERAL NOTES:

1. BUILDINGS, STREET, AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
2. CAPUANO CENTER BUILDING IS BASED ON DRAWING A0.2 FROM THE ARCHITECTURAL BID SET OF "THE EDGERTY EARLY CHILDHOOD DEVELOPMENT CENTER" BY HMFH ARCHITECTS, INC., DATED AUGUST 10, 2001.



IRA Status Report No. 7b
50 Tufts Street
Somerville, Massachusetts
UniFirst Corporation
Wilmington, Massachusetts

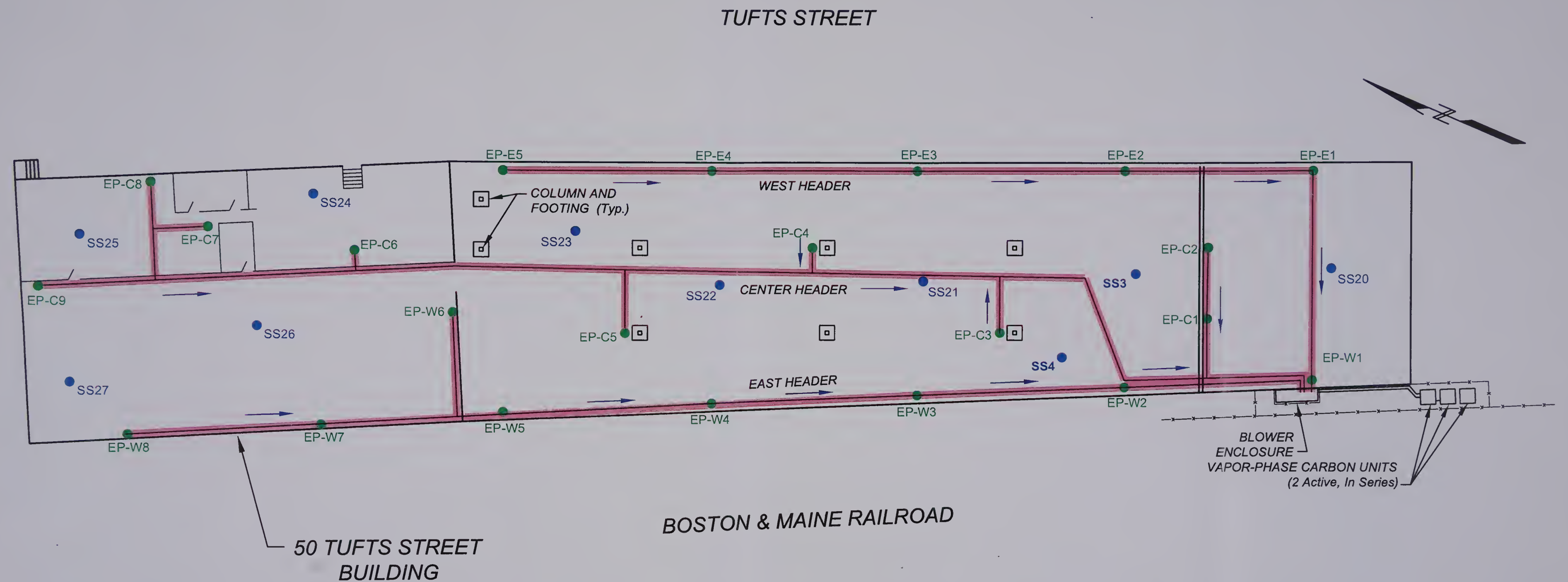


50 TUFTS STREET SITE

Project 04516-2

November 2007

Fig. 2

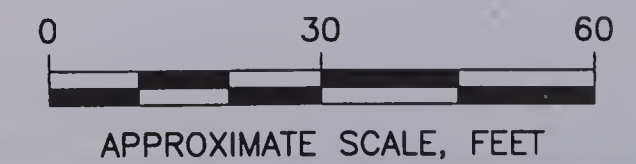



LEGEND:

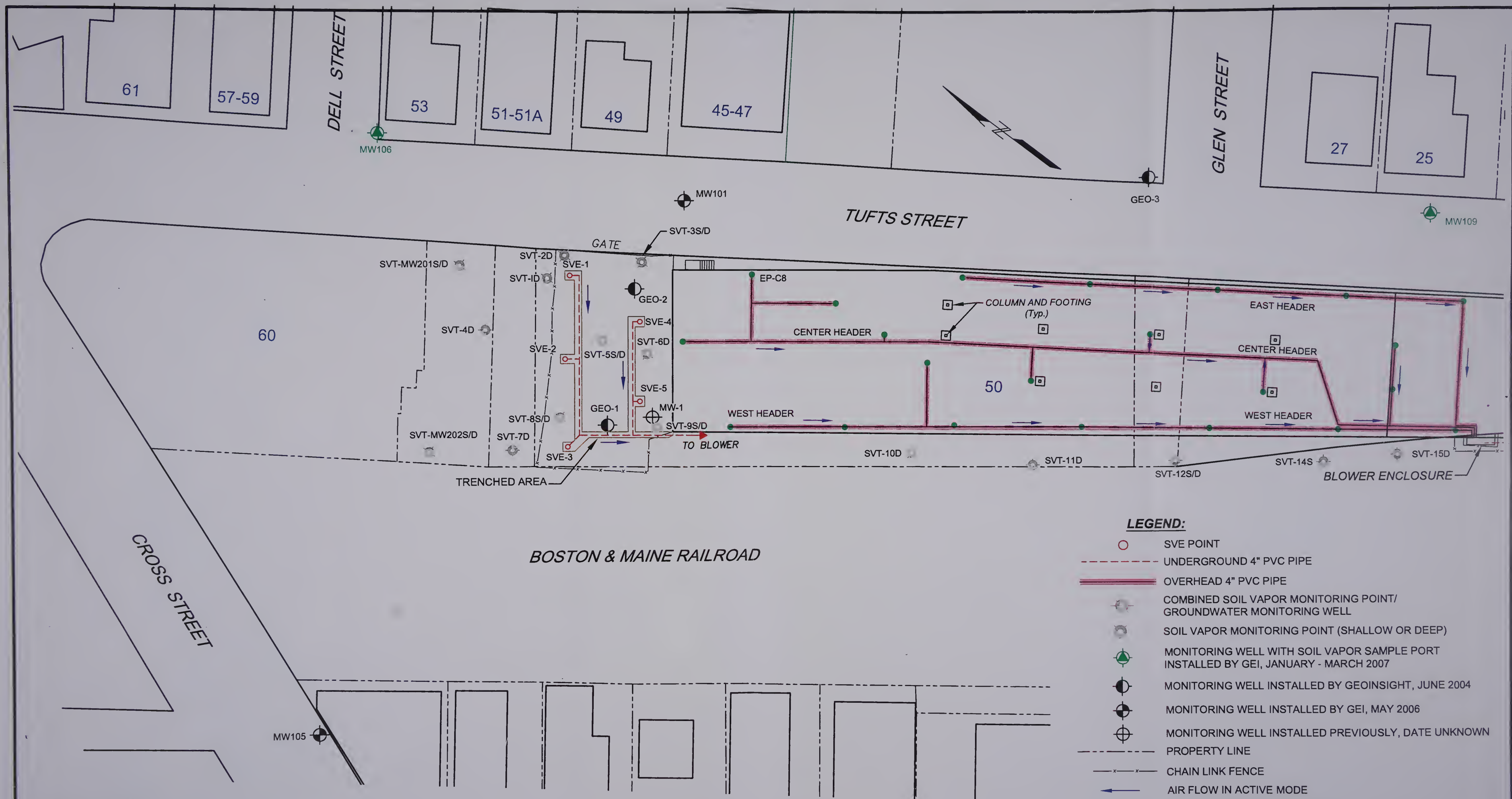
- OVERHEAD 4" PVC PIPE
- AIR FLOW IN ACTIVE MODE
- SUB-SLAB EXTRACTION POINT (4" DIA. SCHEDULE 40 PVC)
- SUB-SLAB MONITORING POINT

NOTES:

1. FIGURE BASED ON PLAN TITLED "INTERSTATE UNIFORM ADDN., TUFTS STREET SOMERVILLE, MASS." BY STRUCTURAL SYSTEMS, INC. DATED 12-2-76.



Remedial Monitoring Report No. 7b 50 Tufts Street Building Somerville, Massachusetts	<div style="text-align: center;">  GEI Consultants </div>	PIPING AND EQUIPMENT LAYOUT FOR SUB-SLAB DEPRESSURIZATION SYSTEM
UniFirst Corporation Wilmington, Massachusetts		

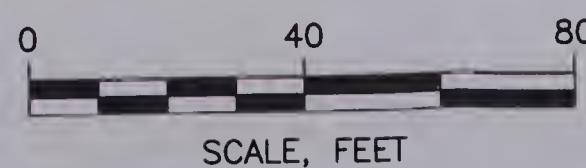


LEGEND:

- SVE POINT
- UNDERGROUND 4" PVC PIPE
- ==== OVERHEAD 4" PVC PIPE
- ⊗ COMBINED SOIL VAPOR MONITORING POINT/
GROUNDWATER MONITORING WELL
- ⊙ SOIL VAPOR MONITORING POINT (SHALLOW OR DEEP)
- ⊕ MONITORING WELL WITH SOIL VAPOR SAMPLE PORT
INSTALLED BY GEI, JANUARY - MARCH 2007
- ⊖ MONITORING WELL INSTALLED BY GEOINSIGHT, JUNE 2004
- ⊙ MONITORING WELL INSTALLED BY GEI, MAY 2006
- ⊕ MONITORING WELL INSTALLED PREVIOUSLY, DATE UNKNOWN
- PROPERTY LINE
- x-x- CHAIN LINK FENCE
- AIR FLOW IN ACTIVE MODE
- SUB-SLAB EXTRACTION POINT
(2" DIA. SCHEDULE 40 PVC)

GENERAL NOTES:

1. HORIZONTAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983.
2. BUILDINGS, STREET, AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
3. EXISTING MONITORING WELL LOCATIONS AND ELEVATIONS WERE ESTABLISHED BY AN ON THE GROUND SURVEY BY BSC GROUP, INC. ON MAY 31, 2006 AND MARCH 16-20, 2007.



Remedial Monitoring Report No. 7b
50 Tufts Street
Somerville, Massachusetts
UniFirst Corporation
Wilmington, Massachusetts

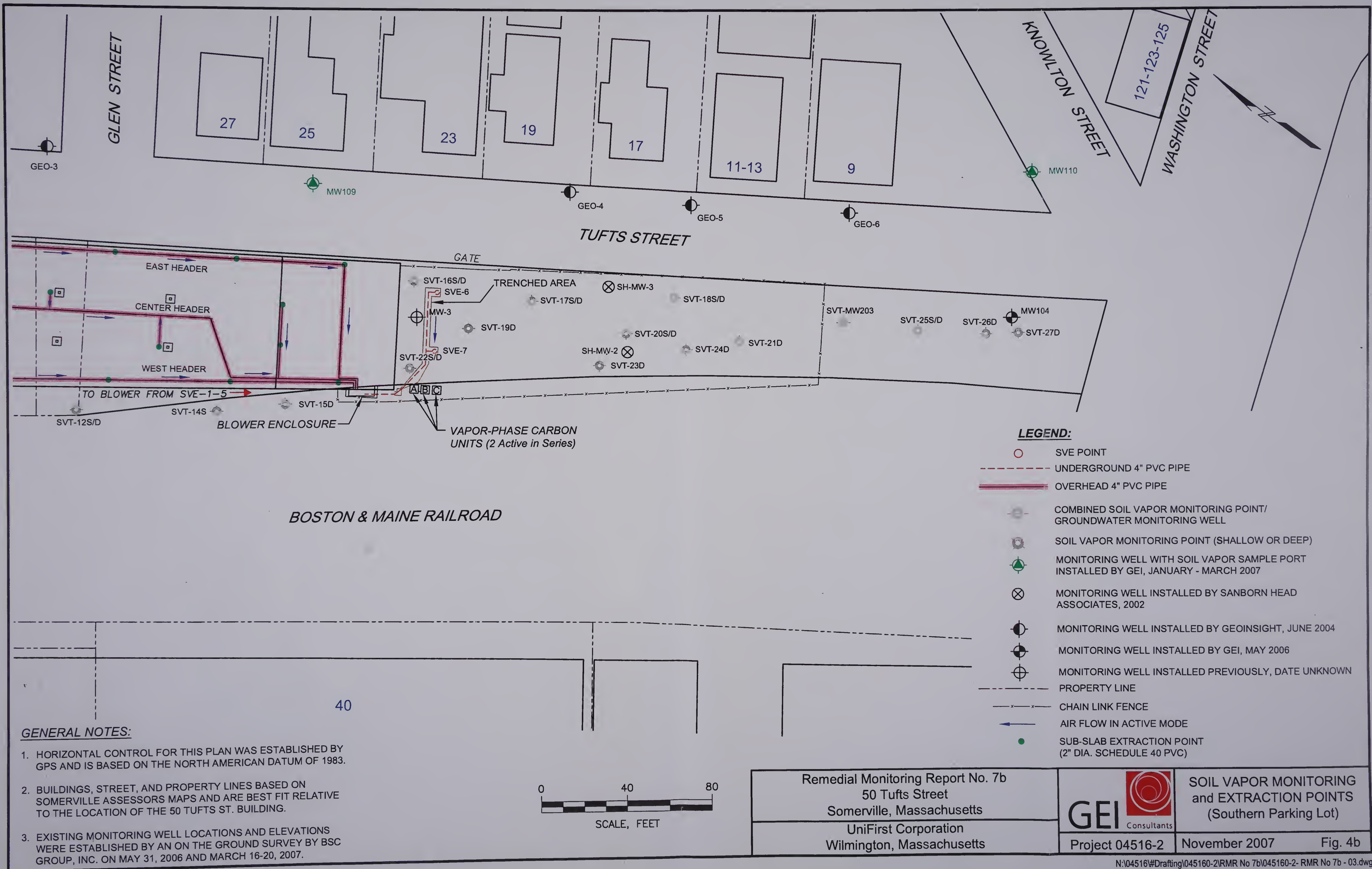


Project 04516-2

SOIL VAPOR MONITORING
and EXTRACTION POINTS
(Northern Parking Lot and
60 Tufts Street)

November 2007

Fig. 4a





Geotechnical
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ATTACHMENT A

BWSC105, BWSC105A and BWSC105B



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **JHAWKER**

Transaction ID: **155351**

Document: **BWSC 105 IRA**

Size of File: **197.136 K**

Status of Transaction: **SUBMITTED**

Date and Time Created: **11/28/2007::10:08:38 AM**

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3

-

23246

A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: 50 TUFTS ST & PROP ACROSS THE ST
2. Street Address: 50 TUFTS ST
3. City/Town: SOMERVILLE 4. ZIP Code: 02145-4129
5. UTM Coordinates: a. UTM N: 4694322 b. UTM E: 328049
- ☐ 6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.
☐ a. Tier IA ☐ b. Tier IB ☒ c. Tier IC ☐ d. Tier II
- ☐ 7. Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114. Specify Program (check one):
☐ a. CERCLA ☐ b. HSWA Corrective Action ☐ c. Solid Waste Management
☐ d. RCRA State Program (21C Facilities)

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial IRA Written Plan (if previously submitted): 1/9/2006
(mm/dd/yyyy)
- ☐ 2. Submit an Initial IRA Plan.
- ☐ 3. Submit a Modified IRA Plan of a previously submitted written IRA Plan.
- ☐ 4. Submit an Imminent Hazard Evaluation. (check one)
☐ a. An Imminent Hazard exists in connection with this Release or Threat of Release.
☐ b. An Imminent Hazard does not exist in connection with this Release or Threat of Release.
☐ c. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.
☐ d. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.
- ☐ 5. Submit a request to Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard.
- ☐ 6. Submit an IRA Status Report.
- ☒ 7. Submit a Remedial Monitoring Report. (This report can only be submitted through eDEP.)
a. Type of Report: (check one) ☐ i. Initial Report ☒ ii. Interim Report ☐ iii. Final Report
b. Frequency of Submittal: (check all that apply)
☒ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
☒ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
☐ iii. A Remedial Monitoring Report(s) submitted concurrent with a IRA Status Report.
c. Number of Remedial Systems and/or Monitoring Programs: 2

A separate BWSC105A, IRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.



**IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM**

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

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B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 8. Submit an **IRA Completion Statement**.

a. Check here if future response actions addressing this Release or Threat of Release notification condition will be conducted as part of the Response Actions planned or ongoing at a Site that has already been Tier Classified under a different Release Tracking Number (RTN) . When linking RTNs, rescoring via the NRS is required if there is a reasonable likelihood that the addition of the new RTN(s) would change the classification of the site.



b. Provide Release Tracking Number of Tier Classified Site (Primary RTN):

-

These additional response actions must occur according to the deadlines applicable to the Primary RTN. Use the Primary RTN when making all future submittals for the site unless specifically relating to this Immediate Response Action.

☐ 9. Submit a **Revised IRA Completion Statement**.

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT IRA:

1. Identify Media Impacted and Receptors Affected: (check all that apply)

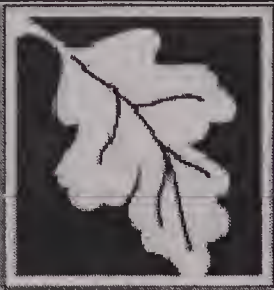
- ☒ a. Air ☒ b. Basement ☒ c. Critical Exposure Pathway ☒ d. Groundwater ☒ e. Residence
☐ f. Paved Surface ☐ g. Private Well ☐ h. Public Water Supply ☒ i. School ☐ j. Sediments
☐ k. Soil ☐ l. Storm Drain ☐ m. Surface Water ☐ n. Unknown ☐ o. Wetland ☐ p. Zone 2
☐ q. Others Specify: _____

2. Identify Oils and Hazardous Materials Released: (check all that apply)

- ☐ a. Oils ☒ b. Chlorinated Solvents ☐ c. Heavy Metals
☐ d. Others Specify: _____

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

- | | |
|--|---|
| <input type="checkbox"/> 1. Assessment and/or Monitoring Only | <input type="checkbox"/> 2. Temporary Covers or Caps |
| <input type="checkbox"/> 3. Deployment of Absorbent or Containment Materials | <input type="checkbox"/> 4. Temporary Water Supplies |
| <input type="checkbox"/> 5. Structure Venting System | <input type="checkbox"/> 6. Temporary Evacuation or Relocation of Residents |
| <input type="checkbox"/> 7. Product or NAPL Recovery | <input type="checkbox"/> 8. Fencing and Sign Posting |
| <input type="checkbox"/> 9. Groundwater Treatment Systems | <input checked="" type="checkbox"/> 10. Soil Vapor Extraction |
| <input type="checkbox"/> 11. Bioremediation | <input type="checkbox"/> 12. Air Sparging |



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D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☒ 13. Excavation of Contaminated Soils

☒ a. Re-use, Recycling or Treatment

☐ i. On Site

Estimated volume in cubic yards

☒ ii. Off Site

Estimated volume in cubic yards

61

ii. Receiving Facility: STABLEX; QUEBEC CANADA

Town: BOSTON

State: MA

iib. Receiving Facility: _____

Town: _____

State: _____

iii. Describe: _____

☐ b. Store

☐ i. On Site

Estimated volume in cubic yards

☐ ii. Off Site

Estimated volume in cubic yards

ii. Receiving Facility: _____

Town: _____

State: _____

iib. Receiving Facility: _____

Town: _____

State: _____

☐ c. Landfill

☐ i. Cover

Estimated volume in cubic yards

Receiving Facility: _____

Town: _____

State: _____

☐ ii. Disposal

Estimated volume in cubic yards

Receiving Facility: _____

Town: _____

State: _____

☐ 14. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____

Town: _____

State: _____

c. Receiving Facility: _____

Town: _____

State: _____

☒ 15. Removal of Other Contaminated Media:

a. Specify Type and Volume: SPENT GRANULAR ACTIVATED CARBON
12,000 LBS

b. Receiving Facility: RINECO

Town: BENTON

State: AR

c. Receiving Facility: _____

Town: _____

State: _____

☒ 16. Other Response Actions:

Describe: _____

TEMPORARY AIR PURIFIERS AND/OR SUB-SLAB DEPRESSURIZATION SYSTEMS

☐ 17. Use of Innovative Technologies:

Describe: _____



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E. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B of this form indicates that an **Immediate Response Action Plan** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Imminent Hazard Evaluation** is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation comply(ies) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> if Section B of this form indicates that an **Immediate Response Action Status Report** and/or a **Remedial Monitoring Report** is(are) being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Immediate Response Action Completion Statement** or a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 9719

2. First Name: ILEEN S

3. Last Name: GLADSTONE

4. Telephone: 7817214012

5. Ext.:

6. FAX:

7. Signature: ILEEN S GLADSTONE

8. Date: 11/28/2007

(mm/dd/yyyy)

9. LSP Stamp:





Massachusetts Department of Environmental Protection
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IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

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F. PERSON UNDERTAKING IRA:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions
2. Name of Organization: UNIFIRST CORP
3. Contact First Name: JOHN R 4. Last Name: BADEY
5. Street: 68 JONSPIN RD 6. Title:
7. City/Town: WILMINGTON 8. State: MA 9. ZIP Code: 01887-0000
10. Telephone: 8003477888 11. Ext.: 12. FAX:

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA:

- ☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter
- ☒ e. Other RP or PRP Specify: OTHER PRPS
- ☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- ☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- ☐ 4. Any Other Person Undertaking IRA Specify Relationship:

H. REQUIRED ATTACHMENT AND SUBMITTALS:

- ☐ 1. Check here if any Remediation Waste, generated as a result of this IRA, will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement. If this box is checked, you must submit one of the following plans, along with the appropriate transmittal form.
- ☐ a. A Release Abatement Measure (RAM) Plan (BWSC106) ☐ b. Phase IV Remedy Implementation Plan (BWSC108)
- ☐ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.
- ☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the implementation of an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.
- ☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the submittal of a Completion Statement for an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.
- ☐ 5. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to the DEP Regional Office.
- ☒ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



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**IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL
FORM** Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

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I. CERTIFICATION OF PERSON UNDERTAKING IRA:

1. I, **JOHN R. BADEY**, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: **JOHN R. BADEY**
Signature

3. Title:

4. For: **UNIFIRST CORP**
(Name of person or entity recorded in Section F)

5. Date: **11/15/2007**
(mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

**Received by DEP on
11/28/2007 10:04:35 AM**



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Release Tracking Number

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Remedial System or Monitoring Program: 1 of: 2

A. DESCRIPTION OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:

1. Type of Active Remedial System or Active Remedial Monitoring Program: (check all that apply)

- ☒ a. Active Remedial System: (check all that apply)
- | | | |
|---|---|--|
| <input type="checkbox"/> i. NAPL Recovery | <input type="checkbox"/> ii. Soil Vapor Extraction/Bioventing | <input checked="" type="checkbox"/> iii. Vapor-phase Carbon Adsorption |
| <input type="checkbox"/> iv. Groundwater Recovery | <input type="checkbox"/> v. Dual/Multi-phase Extraction | <input type="checkbox"/> vi. Aqueous-phase Carbon Adsorption |
| <input type="checkbox"/> vii. Air Stripping | <input type="checkbox"/> viii. Sparging/Biosparging | <input type="checkbox"/> ix. Cat/Thermal Oxidation |
- ☒ x. Other Describe: **SUB-SLAB DEPRESSURIZATION SYSTEM**
- ☐ b. Application of Remedial Additives: (check all that apply)
- | | | |
|---|---|--|
| <input type="checkbox"/> i. To the Subsurface | <input type="checkbox"/> ii. To Groundwater (Injection) | <input type="checkbox"/> iii. To the Surface |
|---|---|--|
- ☐ c. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section F5)
- | | | |
|---|--|---|
| <input type="checkbox"/> i. Reactive Wall | <input type="checkbox"/> ii. Natural Attenuation | <input type="checkbox"/> iii. Other Describe: _____ |
|---|--|---|

2. Mode of Operation: (check one)

- ☒ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☒ c. Vapor-phase Discharge to Ambient Air: (check one) ☒ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: **10/1/2007** To: **10/31/2007**
(mm/dd/yyyy) (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

- ☐ a. System Startup: (if applicable)
- | |
|--|
| <input type="checkbox"/> i. Days 1, 3, 6, and then weekly thereafter, for the first month. |
| <input type="checkbox"/> ii. Other Describe: _____ |
- ☒ b. Post-system Startup (after first month) or Monitoring Program:
- | |
|---|
| <input type="checkbox"/> i. Monthly |
| <input type="checkbox"/> ii. Quarterly |
| <input checked="" type="checkbox"/> iii. Other Describe: TOTAL VOCs WEEKLY AND INDOOR AIR QUARTERLY 1 YEAR |

☒ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

- ☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: _____
(mm/dd/yyyy)
- ☒ 2. MCP Performance Standard MCP Citations(s): **WSC-94-150**
- ☐ 3. DEP Approval Letter Date of Letter: _____
(mm/dd/yyyy)
- ☐ 4. Other Describe: _____



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IRA REMEDIAL MONITORING REPORT

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Remedial System or Monitoring Program: 1 of: 2

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name:

b. Grade:

c. License No.:

d. License Exp. Date:

(mm/dd/yyyy)

- ☐ 2. Not Required

- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD:

(check all that apply)

- ☒ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional:

30

b. GW Recovered (gals):

c. NAPL Recovered (gals):

d. GW Discharged (gals):

e. Avg. Soil Gas Recovery Rate (scfm):

368.5

f. Avg. Sparging Rate (scfm):

- ☐ 2. Remedial Additives: (check all that apply)

- ☐ a. No Remedial Additives applied during the Reporting Period.

- ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

- ☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

- ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

- ☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

- ☐ iv. Other:

Name of Additive	Date	Quantity	Units

- ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

- ☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

- ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

- ☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

- ☐ iv. Other:

Name of Additive	Date	Quantity	Units



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IRA REMEDIAL MONITORING REPORT

Release Tracking Number

Pursuant to 310 CMR 40.0400 (SUBPART D)

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Remedial System or Monitoring Program: 1 of: 2

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)
(check all that apply)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☒ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☒ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☒ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☒ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.



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IRA REMEDIAL MONITORING REPORT EFFLUENT/DISCHARGE CONCENTRATIONS

Pursuant to 310 CMR 40.0400 (SUBPART D)

Remedial System or Monitoring Program:

1 of 2

BWSC105B

Release Tracking Number

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For each Point of Measurement, indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.

[illegible]

☐ Check here if an additional BWS105B, Effluent/Discharge Concentrations Form, is needed.



Massachusetts Department of Environmental Protection
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BWSC105A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Release Tracking Number

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Remedial System or Monitoring Program: 2 of: 2

A. DESCRIPTION OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:

1. Type of Active Remedial System or Active Remedial Monitoring Program: (check all that apply)

- ☒ a. Active Remedial System: (check all that apply)
- | | | |
|---|--|--|
| <input type="checkbox"/> i. NAPL Recovery | <input checked="" type="checkbox"/> ii. Soil Vapor Extraction/Bioventing | <input checked="" type="checkbox"/> iii. Vapor-phase Carbon Adsorption |
| <input type="checkbox"/> iv. Groundwater Recovery | <input type="checkbox"/> v. Dual/Multi-phase Extraction | <input type="checkbox"/> vi. Aqueous-phase Carbon Adsorption |
| <input type="checkbox"/> vii. Air Stripping | <input type="checkbox"/> viii. Sparging/Biosparging | <input type="checkbox"/> ix. Cat/Thermal Oxidation |
| <input type="checkbox"/> x. Other Describe: _____ | | |
- ☐ b. Application of Remedial Additives: (check all that apply)
- | | | |
|---|---|--|
| <input type="checkbox"/> i. To the Subsurface | <input type="checkbox"/> ii. To Groundwater (Injection) | <input type="checkbox"/> iii. To the Surface |
|---|---|--|
- ☐ c. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section F5)
- | | | |
|---|--|---|
| <input type="checkbox"/> i. Reactive Wall | <input type="checkbox"/> ii. Natural Attenuation | <input type="checkbox"/> iii. Other Describe: _____ |
|---|--|---|

2. Mode of Operation: (check one)

- ☒ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☒ c. Vapor-phase Discharge to Ambient Air: (check one) ☒ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 10/1/2007 To: 10/31/2007
(mm/dd/yyyy) (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

- ☐ a. System Startup: (if applicable)
- | |
|--|
| <input type="checkbox"/> i. Days 1, 3, 6, and then weekly thereafter, for the first month. |
| <input type="checkbox"/> ii. Other Describe: _____ |
- ☒ b. Post-system Startup (after first month) or Monitoring Program:
- | |
|--|
| <input type="checkbox"/> i. Monthly |
| <input type="checkbox"/> ii. Quarterly |
| <input checked="" type="checkbox"/> iii. Other Describe: TOTAL VOCs WEEKLY AND INDOOR AIR QUARTERLY 1 YEAR |

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

- ☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: _____
(mm/dd/yyyy)
- ☒ 2. MCP Performance Standard MCP Citations(s): WSC-94-150
- ☐ 3. DEP Approval Letter Date of Letter: _____
(mm/dd/yyyy)
- ☐ 4. Other Describe: _____



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BWSC105 A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Release Tracking Number

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Remedial System or Monitoring Program: 2 of: 2

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: b. Grade:
c. License No.: d. License Exp. Date:
(mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD:

(check all that apply)

- ☒ 1. The Active Remedial System was functional one or more days during the Reporting Period.
a. Days System was Fully Functional: 30 b. GW Recovered (gals):
c. NAPL Recovered (gals): d. GW Discharged (gals):
e. Avg. Soil Gas Recovery Rate (scfm): 368.5 f. Avg. Sparging Rate (scfm):

- ☐ 2. Remedial Additives: (check all that apply)
- ☐ a. No Remedial Additives applied during the Reporting Period.
- ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

- ☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

- ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

- ☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

- ☐ iv. Other:

Name of Additive	Date	Quantity	Units

- ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

- ☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

- ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

- ☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

- ☐ iv. Other:

Name of Additive	Date	Quantity	Units



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105A

IRA REMEDIAL MONITORING REPORT

Release Tracking Number

Pursuant to 310 CMR 40.0400 (SUBPART D)

3

-

23246

Remedial System or Monitoring Program: 2 of: 2

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)
(check all that apply)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☒ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☒ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

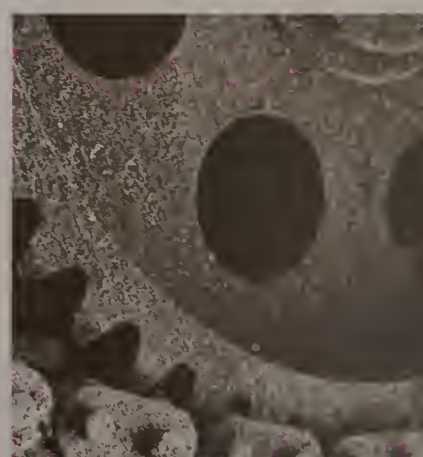
☒ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☒ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.



Geotechnical
Environmental and
Water Resources
Engineering



ATTACHMENT B

Weekly Mechanical Inspection Logs for 50 Tufts Street

Weekly SSDS Inspection Log for 50 Tufts Street

GENERAL MONITORING INFORMATION			
GEI Field Representative(s):	T. Daigle	Monitoring Start Time:	7:00 AM
Date:	10/2/2007	Monitoring End Time:	7:30 AM
Weather:	sunny 50's		

INSTRUMENTATION INFORMATION			
Instrument	Manufacturer	Model	Calibrated To:
PID (ppm)	Thermo Env. Instruments, Inc	580B	100 ppm Isobutylene
Manometer (in H ₂ O)	Dwyer	Mark III-475-0 Series	N/A
			Successful Calibration?
			Yes
			N/A

FIELD MEASUREMENTS / OBSERVATIONS						
System Status/Configuration		Pressure/VOC Measurements		System Flow Rate Data		
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Thermo Anenometer Flow Velocity (ft. minute)	Estimated System Flowrate (CFM):
Fenced Enclosure Secure?	Yes	West Header	-4.69	37.1	4420	386
Blower On?	Yes	Center Header	-4.62	72.5		
Condensate Accumulated?	No	East Header	-2.06	108		
Condensate Drained?	N/A	North Header	-4.78	1134		
Primary Carbon Unit?	A	South Header	-4.83	225		
Secondary Carbon Unit?	C	Primary Carbon Influent	-6.41	121		
Offline Carbon Unit?	B	Primary Carbon Effluent	NM	52		
Offline Carbon Unit Status	Used	System Discharge	N/A	0		
		Blower Filter Inlet	NM			
		Blower Filter Outlet	NM			

COMMENTS	
Ambient air = 0 to 0 ppm VOCs	
PID rented from PINE. Serial no: 79662-414	
ppm = parts per million	
NM = Not Measured	
N/A = Not Applicable	
CFM = cubic feet per minute	

Weekly SSDS Inspection Log for 50 Tufts Street

SSDS Indoor Monitoring Points and Extraction Points

10/2/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
EP-W1	-4.125	188
EP-W2	-3.128	74
EP-W3	-2.319	23.1
EP-W4	-1.663	0.2
EP-W5	-1.271	0
EP-W6	-1.434	0
EP-W7	-1.378	0.3
EP-W8	-1.403	9.7
EP-C1	-4.037	10.5
EP-C2	-4.092	56
EP-C3	-3.804	48
EP-C4	-3.558	NM
EP-C5	-3.398	87
EP-C6	-3.108	NM
EP-C7	-2.587	4.8
EP-C8	-2.897	5.5
EP-C9	-2.933	3.7
EP-E1	-1.872	323
EP-E2	-1.818	17.2
EP-E3	-1.658	1.5
EP-E4	-1.687	1.1
EP-E5	-1.683	0
SS3	NM	NM
SS4	-0.734	NM
SS20	-0.109	NM
SS21	-0.497	NM
SS22	-0.517	NM
SS23	-0.315	NM
SS24	-0.436	NM
SS25	-0.765	NM
SS26	-0.397	NM
SS27	-0.181	NM

Weekly SSDS Inspection Log for 50 Tufts Street

SVE Outdoor Monitoring Points and Extraction Points

10/2/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
SVE-1	-4.72	7.1
SVE-2	-4.72	13.1
SVE-3	-4.73	308
SVE-4	-4.73	133
SVE-5	-4.71	1093
SVE-6	-4.82	73
SVE-7	-4.78	181
SVT-MW201D	-0.049	0
SVT-MW201S	-0.004	0.3
SVT-MW202D	-0.006	0
SVT-MW202S	0	0
SVT-	-0.34	1
SVT-2D	-0.744	0.1
SVT-	-0.101	5
SVT-	-0.083	1.4
SVT-4D	-0.088	7
SVT-5D	-1.547	1.7
SVT-5S	-0.576	1.1
SVT-6D	-1.296	20
SVT-7D	-0.024	0.1
SVT-8D	-1.764	189
SVT-	-0.201	292
SVT-9D	-0.859	950
SVT-9S	-0.411	800
SVT-10D	NM	NM
SVT-11S	NM	NM
SVT-12D	NM	NM
SVT-12S	NM	NM
SVT-14S	NM	NM
SVT-15D	NM	NM
SVT-16D	NM	15
SVT-16S	-0.005	47
SVT-17D	0	28
SVT-17S	0	22
SVT-18D	NM	NM
SVT-19D	-0.007	265
SVT-20D	NM	NM
SVT-20S	NM	NM
SVT-21D	NM	NM
SVT-22D	-0.194	92
SVT-22S	-0.045	50
SVT-23D	NM	NM
SVT-24D	NM	NM
SVT-25D	NM	NM
SVT-25S	NM	NM
SVT-26D	NM	NM
SVT-27D	NM	NM

Weekly SSDS and SVE Inspection Log for 50 Tufts Street

GENERAL MONITORING INFORMATION			
GEI Field Representative(s):	S. Slater	Monitoring Start Time:	7:00
		Monitoring End Time:	8:00
Date:	10/5/2007		
Weather:	sunny, 80's		

INSTRUMENTATION INFORMATION				
Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	Thermo Env. Instruments, Inc	580B	100 ppm Isobutylene	Yes
Manometer (in H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	N/A

FIELD MEASUREMENTS / OBSERVATIONS						
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Thermo Anenometer Flow Velocity (ft. minute)	Estimated System Flowrate (CFM):
Fenced Enclosure Secure?	Yes	West Header	NM	NM	NM	NM
Blower On?	Yes	Center Header	NM	NM		
Condensate Accumulated?	No	East Header	NM	NM		
Condensate Drained?	No	North Header	NM	NM		
Lead Carbon Unit?	A	South Header	NM	NM		
Polish Carbon Unit?	C	Combined System Influent	NM	NM		
Offline Carbon Unit?	B	Lead Carbon Effluent	NM	NM		
Offline Carbon Unit Status	Used	System Discharge	N/A	NM		
		Blower Filter Inlet	NM			
		Blower Filter Outlet	NM			

COMMENTS	
Ambient air = 0 to 0 ppm VOCs	conducted vacuum measurements of indoor extraction and monitoring points
ppm = parts per million NM = Not Measured N/A = Not Applicable CFM = cubic feet per minute	

Weekly SSDS and SVE Inspection Log for 50 Tufts Street

SSDS Indoor Monitoring Points and Extraction Points

10/5/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
EP-W1	-4.203	NM
EP-W2	-3.2	NM
EP-W3	-2.42	NM
EP-W4	-1.771	NM
EP-W5	-1.348	NM
EP-W6	-1.517	NM
EP-W7	-1.473	NM
EP-W8	-1.487	NM
EP-C1	-4.085	NM
EP-C2	-4.17	NM
EP-C3	-3.85	NM
EP-C4	-3.668	NM
EP-C5	-3.493	NM
EP-C6	-3.174	NM
EP-C7	-2.696	NM
EP-C8	-2.984	NM
EP-C9	-3.038	NM
EP-E1	-1.963	NM
EP-E2	-1.917	NM
EP-E3	-1.76	NM
EP-E4	-1.773	NM
EP-E5	-1.778	NM
SS3	NM	NM
SS4	NM	NM
SS20	-0.093	NM
SS21	-0.567	NM
SS22	-0.559	NM
SS23	-0.338	NM
SS24	-0.455	NM
SS25	-0.794	NM
SS26	-0.448	NM
SS27	-0.189	NM

Weekly SSDS and SVE Inspection Log for 50 Tufts Street

SVE Outdoor Monitoring Points and Extraction Points
10/5/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
SVE-1	NM	NM
SVE-2	NM	NM
SVE-3	NM	NM
SVE-4	NM	NM
SVE-5	NM	NM
SVE-6	NM	NM
SVE-7	NM	NM
SVT-MW201D	NM	NM
SVT-MW201S	NM	NM
SVT-MW202D	NM	NM
SVT-MW202S	NM	NM
SVT-1D	NM	NM
SVT-2D	NM	NM
SVT-3D	NM	NM
SVT-3S	NM	NM
SVT-4D	NM	NM
SVT-5D	NM	NM
SVT-5S	NM	NM
SVT-6D	NM	NM
SVT-7D	NM	NM
SVT-8D	NM	NM
SVT-8S	NM	NM
SVT-9D	NM	NM
SVT-9S	NM	NM
SVT-10D	NM	NM
SVT-11S	NM	NM
SVT-12D	NM	NM
SVT-12S	NM	NM
SVT-14S	NM	NM
SVT-15D	NM	NM
SVT-16D	NM	NM
SVT-16S	NM	NM
SVT-17D	NM	NM
SVT-17S	NM	NM
SVT-18D	NM	NM
SVT-19D	NM	NM
SVT-20D	NM	NM
SVT-20S	NM	NM
SVT-21D	NM	NM
SVT-22D	NM	NM
SVT-22S	NM	NM
SVT-23D	NM	NM
SVT-24D	NM	NM
SVT-25D	NM	NM
SVT-25S	NM	NM
SVT-26D	NM	NM
SVT-27D	NM	NM

Weekly SSDS Inspection Log for 50 Tufts Street

GENERAL MONITORING INFORMATION			
GEI Field Representative(s):	T. Daigle	Monitoring Start Time:	12:00 PM
Date:	10/16/2007	Monitoring End Time:	12:30 PM
Weather:	Sunny 60's		

INSTRUMENTATION INFORMATION			
Instrument	Manufacturer	Model	Calibrated To:
PID (ppm)	Thermo Env. Instruments, Inc	580B	100 ppm Isobutylene
Manometer (in H ₂ O)	Dwyer	Mark III-475-0 Series	N/A
			Successful Calibration?
			Yes
			N/A

FIELD MEASUREMENTS / OBSERVATIONS						
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Thermo Anenometer Flow Velocity (ft. minute)	Estimated System Flowrate (CFM):
Fenced Enclosure Secure?	Yes	West Header	-4.05	36.8	4060	354
Blower On?	Yes	Center Header	-4.01	63.2		
Condensate Accumulated?	No	East Header	-1.78	121		
Condensate Drained?	N/A	North Header	-4.09	1140		
Primary Carbon Unit?	C	South Header	-4.16	188		
Secondary Carbon Unit?	A	Primary Carbon Influent	-5.54	120		
Offline Carbon Unit?	B	Primary Carbon Effluent	15.16	0.063		
Offline Carbon Unit Status	Unused	System Discharge	N/A	0		
		Blower Filter Inlet	-15			
		Blower Filter Outlet	-19			

COMMENTS	
Ambient air = 0	to 0 ppm VOCs
PID rented from PINE. Serial no: 79662-414	
ppm = parts per million	
NM = Not Measured	
N/A = Not Applicable	
CFM = cubic feet per minute	

Weekly SSDS Inspection Log for 50 Tufts Street

SSDS Indoor Monitoring Points and Extraction Points
10/16/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
EP-W1	NM	NM
EP-W2	NM	NM
EP-W3	NM	NM
EP-W4	NM	NM
EP-W5	NM	NM
EP-W6	NM	NM
EP-W7	NM	NM
EP-W8	NM	NM
EP-C1	NM	NM
EP-C2	NM	NM
EP-C3	NM	NM
EP-C4	NM	NM
EP-C5	NM	NM
EP-C6	NM	NM
EP-C7	NM	NM
EP-C8	NM	NM
EP-C9	NM	NM
EP-E1	NM	NM
EP-E2	NM	NM
EP-E3	NM	NM
EP-E4	NM	NM
EP-E5	NM	NM
SS3	NM	NM
SS4	NM	NM
SS20	NM	NM
SS21	NM	NM
SS22	NM	NM
SS23	NM	NM
SS24	NM	NM
SS25	NM	NM
SS26	NM	NM
SS27	NM	NM

Weekly SSDS Inspection Log for 50 Tufts Street

SVE Outdoor Monitoring Points and Extraction Points
10/16/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
SVE-1	-4.06	9.5
SVE-2	-4.03	12
SVE-3	-4.01	405
SVE-4	-4.05	150
SVE-5	-4.02	1900
SVE-6	-4.11	78
SVE-7	-4.13	197
SVT-MW201D	-0.051	0.7
SVT-MW201S	-0.003	0
SVT-MW202D	-0.018	0
SVT-MW202S	0	0
SVT-	-0.298	1.5
SVT-2D	-0.66	1.2
SVT-	-0.091	0
SVT-	-0.077	1.6
SVT-4D	-0.076	0
SVT-5D	-1.354	5.6
SVT-5S	-0.578	2.7
SVT-6D	-1.135	9
SVT-7D	-0.02	0
SVT-8D	-1.465	0.8
SVT-	-0.18	645
SVT-9D	-0.76	2034
SVT-9S	-0.554	545
SVT-10D	NM	NM
SVT-11S	NM	NM
SVT-12D	NM	NM
SVT-12S	NM	NM
SVT-14S	NM	NM
SVT-15D	NM	NM
SVT-16D	-0.051	22
SVT-16S	0	39
SVT-17D	0.004	34
SVT-17S	0	18
SVT-18D	NM	NM
SVT-19D	0	320
SVT-20D	NM	NM
SVT-20S	NM	NM
SVT-21D	NM	NM
SVT-22D	-0.161	175
SVT-22S	-0.004	45
SVT-23D	NM	NM
SVT-24D	NM	NM
SVT-25D	NM	NM
SVT-25S	NM	NM
SVT-26D	NM	NM
SVT-27D	NM	NM

Weekly SSDS Inspection Log for 50 Tufts Street

GENERAL MONITORING INFORMATION			
GEI Field Representative(s):	T. Daigle	Monitoring Start Time:	11:30 AM
Date:	10/23/2007	Monitoring End Time:	1:30 PM
Weather:	cloudy, 50's		

INSTRUMENTATION INFORMATION			
Instrument	Manufacturer	Model	Successful Calibration?
PID (ppm)	Thermo Env. Instruments, Inc	580B	Yes
Manometer (in H ₂ O)	Dwyer	Mark III-475-0 Series	N/A

FIELD MEASUREMENTS / OBSERVATIONS						
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Thermo Anenometer Flow Velocity (ft. minute)	Estimated System Flowrate (CFM):
Fenced Enclosure Secure?	Yes	West Header	-4.21	32	4150	362
Blower On?	Yes	Center Header	-4.1	69		
Condensate Accumulated?	No	East Header	-1.96	104		
Condensate Drained?	N/A	North Header	-4.34	940		
Primary Carbon Unit?	C	South Header	-4.33	244		
Secondary Carbon Unit?	A	Primary Carbon Influent	-5.67	94		
Offline Carbon Unit?	B	Primary Carbon Effluent	15.68	6.1		
Offline Carbon Unit Status	Unused	System Discharge	N/A	0		
		Blower Filter Inlet	-15			
		Blower Filter Outlet	-20			

COMMENTS	
Ambient air = 0	to 0 ppm VOCs
PID rented from PINE serial No: 69186 362	
ppm = parts per million	
NM = Not Measured	
N/A = Not Applicable	
CFM = cubic feet per minute	

Weekly SSDS Inspection Log for 50 Tufts Street
SSDS Indoor Monitoring Points and Extraction Points
10/23/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
EP-W1	NM	NM
EP-W2	NM	NM
EP-W3	NM	NM
EP-W4	NM	NM
EP-W5	NM	NM
EP-W6	NM	NM
EP-W7	NM	NM
EP-W8	NM	NM
EP-C1	NM	NM
EP-C2	NM	NM
EP-C3	NM	NM
EP-C4	NM	NM
EP-C5	NM	NM
EP-C6	NM	NM
EP-C7	NM	NM
EP-C8	NM	NM
EP-C9	NM	NM
EP-E1	NM	NM
EP-E2	NM	NM
EP-E3	NM	NM
EP-E4	NM	NM
EP-E5	NM	NM
SS3	NM	NM
SS4	NM	NM
SS20	NM	NM
SS21	NM	NM
SS22	NM	NM
SS23	NM	NM
SS24	NM	NM
SS25	NM	NM
SS26	NM	NM
SS27	NM	NM

Weekly SSDS Inspection Log for 50 Tufts Street

SVE Outdoor Monitoring Points and Extraction Points
10/23/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
SVE-1	-4.23	9
SVE-2	-4.22	11
SVE-3	-4.24	297
SVE-4	-4.21	110
SVE-5	-4.22	1460
SVE-6	-4.28	86
SVE-7	-4.31	172
SVT-MW201D	-0.075	0.7
SVT-MW201S	-0.007	1.2
SVT-MW202D	-0.041	0
SVT-MW202S	0	0
SVT-1D	-0.337	2.7
SVT-2D	-0.703	2
SVT-3D	-0.107	0.3
SVT-3S	-0.091	2.8
SVT-4D	-0.102	0
SVT-5D	-1.382	0.9
SVT-5S	-0.648	5.1
SVT-6D	-1.209	12
SVT-7D	-0.017	0.2
SVT-8D	-1.325	79
SVT-8S	-0.212	744
SVT-9D	-0.724	1480
SVT-9S	-0.362	1050
SVT-10D	NM	NM
SVT-11S	NM	NM
SVT-12D	NM	NM
SVT-12S	NM	NM
SVT-14S	NM	NM
SVT-15D	NM	NM
SVT-16D	0.287	23
SVT-16S	0	41
SVT-17D	0	46
SVT-17S	0	29
SVT-18D	NM	NM
SVT-19D	-0.004	210
SVT-20D	0.003	36
SVT-20S	0	19
SVT-21D	NM	NM
SVT-22D	0.221	831
SVT-22S	-0.003	55
SVT-23D	NM	NM
SVT-24D	NM	NM
SVT-25D	NM	NM
SVT-25S	NM	NM
SVT-26D	NM	NM
SVT-27D	NM	NM

Weekly SSDS Inspection Log for 50 Tufts Street

GENERAL MONITORING INFORMATION			
GEI Field Representative(s):	T. Daigle	Monitoring Start Time:	1:00 PM
	C. Malagrida	Monitoring End Time:	3:00 PM
Date:	10/30/2007		
Weather:	sunny, 50's		

INSTRUMENTATION INFORMATION			
Instrument	Manufacturer	Model	Successful Calibration?
PID (ppm)	Thermo Env. Instruments, Inc	580B	Yes
Manometer (in H ₂ O)	Dwyer	Mark III-475-0 Series	N/A

FIELD MEASUREMENTS / OBSERVATIONS						
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Thermo Anenometer Flow Velocity (ft. minute)	Estimated System Flowrate (CFM):
Fenced Enclosure Secure?	Yes	West Header	-4	28	4265	372
Blower On?	Yes	Center Header	-3.96	57.6		
Condensate Accumulated?	No	East Header	-1.68	93		
Condensate Drained?	N/A	North Header	-4.09	802		
Primary Carbon Unit?	C	South Header	-4.11	152.5		
Secondary Carbon Unit?	A	Primary Carbon Influent	-5.51	95.5		
Offline Carbon Unit?	B	Primary Carbon Effluent	15.85	12.5		
Offline Carbon Unit Status	Unused	System Discharge	N/A	0		
		Blower Filter Inlet	-15			
		Blower Filter Outlet	-19			

COMMENTS	
Ambient air = 0 to 0 ppm VOCs	PID rented from PINE. Serial no: 79662-414
ppm = parts per million NM = Not Measured N/A = Not Applicable CFM = cubic feet per minute	

Weekly SSDS Inspection Log for 50 Tufts Street
SSDS Indoor Monitoring Points and Extraction Points
10/30/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
EP-W1	NM	NM
EP-W2	NM	NM
EP-W3	NM	NM
EP-W4	NM	NM
EP-W5	NM	NM
EP-W6	NM	NM
EP-W7	NM	NM
EP-W8	NM	NM
EP-C1	NM	NM
EP-C2	NM	NM
EP-C3	NM	NM
EP-C4	NM	NM
EP-C5	NM	NM
EP-C6	NM	NM
EP-C7	NM	NM
EP-C8	NM	NM
EP-C9	NM	NM
EP-E1	NM	NM
EP-E2	NM	NM
EP-E3	NM	NM
EP-E4	NM	NM
EP-E5	NM	NM
SS3	NM	NM
SS4	NM	NM
SS20	NM	NM
SS21	NM	NM
SS22	NM	NM
SS23	NM	NM
SS24	NM	NM
SS25	NM	NM
SS26	NM	NM
SS27	NM	NM

Weekly SSDS Inspection Log for 50 Tufts Street

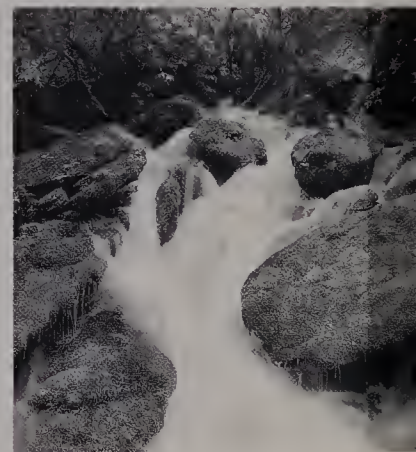
SVE Outdoor Monitoring Points and Extraction Points

10/30/2007

Monitoring Point	Pressure (in. wc)	VOC (ppm)
SVE-1	-4.05	6.4
SVE-2	-4.01	8.5
SVE-3	-4.01	297
SVE-4	-4.03	109.5
SVE-5	-4.07	1300
SVE-6	-4.11	84.4
SVE-7	-4.09	210
SVT-MW201D	-0.042	0.8
SVT-MW201S	-0.005	0.1
SVT-MW202D	-0.019	0
SVT-MW202S	0	0
SVT-	-0.182	0.9
SVT-2D	-0.671	0
SVT-	-0.1	0
SVT-	-0.083	0.1
SVT-4D	-0.066	0
SVT-5D	-1.391	4.4
SVT-5S	-0.624	2.1
SVT-6D	-1.155	8.6
SVT-7D	-0.021	0
SVT-8D	-1.267	0
SVT-	-0.194	610
SVT-9D	-0.823	1230
SVT-9S	-0.055	1050
SVT-10D	NM	NM
SVT-11S	NM	NM
SVT-12D	NM	NM
SVT-12S	NM	NM
SVT-14S	NM	NM
SVT-15D	NM	NM
SVT-16D	-0.059	8.5
SVT-16S	-0.005	21.3
SVT-17D	0	52
SVT-17S	0	12.2
SVT-18D	NM	NM
SVT-19D	-0.008	222
SVT-20D	0	38
SVT-20S	0	20
SVT-21D	NM	NM
SVT-22D	-0.166	606
SVT-22S	-0.003	36
SVT-23D	NM	NM
SVT-24D	NM	NM
SVT-25D	NM	NM
SVT-25S	NM	NM
SVT-26D	NM	NM
SVT-27D	NM	NM



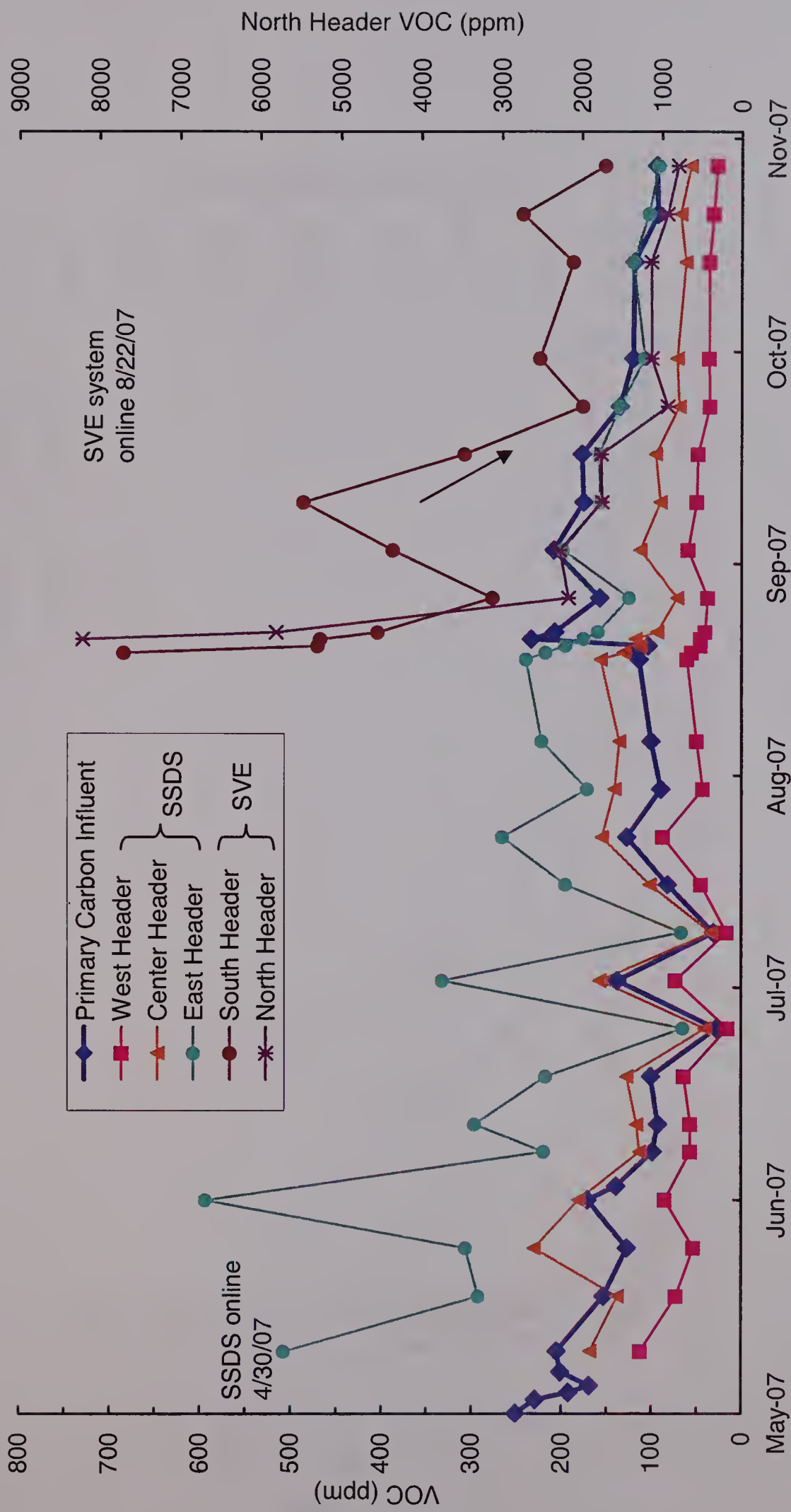
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Water Resources
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ATTACHMENT C

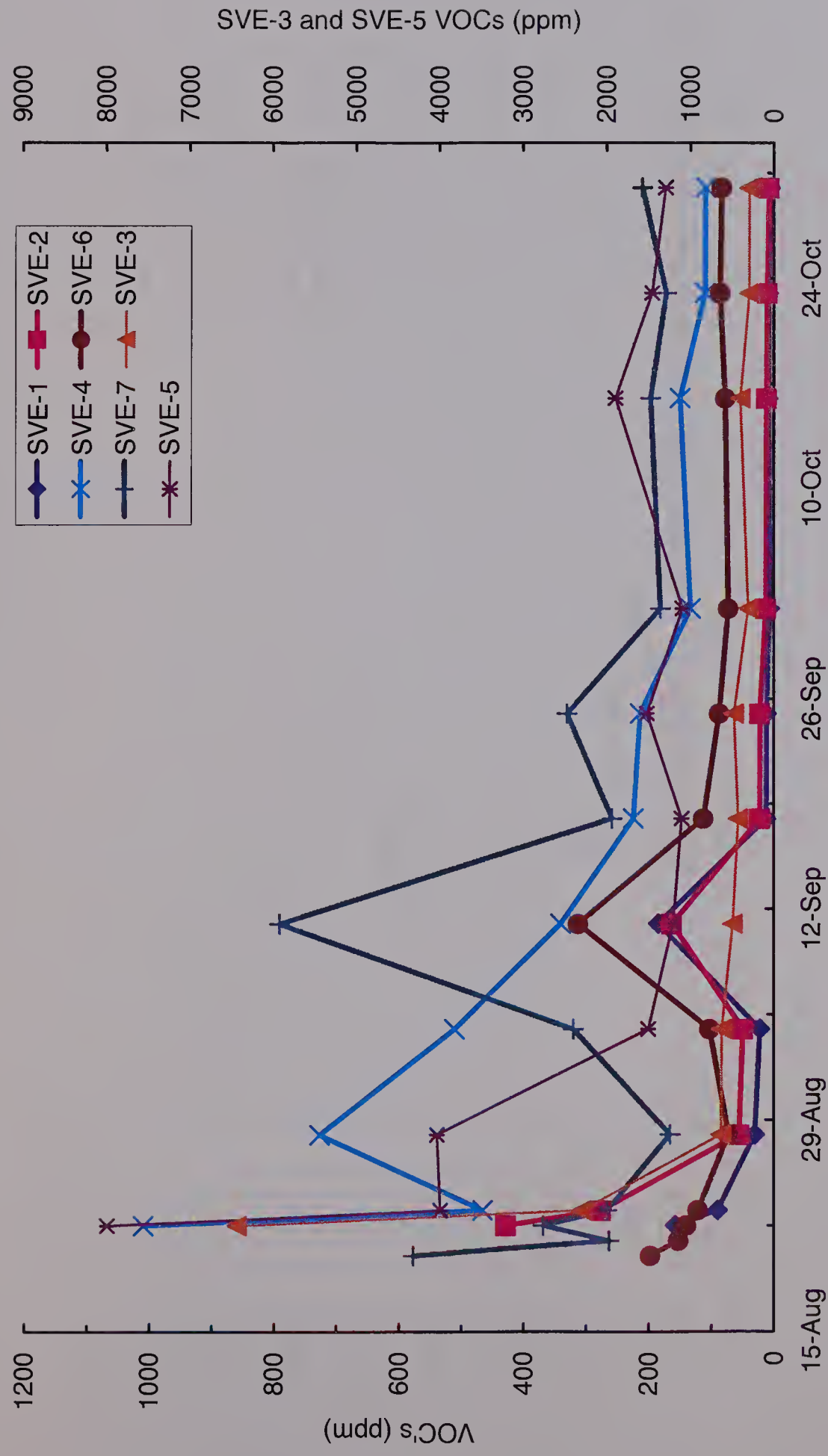
Graphs of SSDS and Sub-Slab Total VOC Concentrations

Graph 1
SSDS and SVE Header Pipe VOC Concentrations 50 Tufts Street
Somerville, Massachusetts

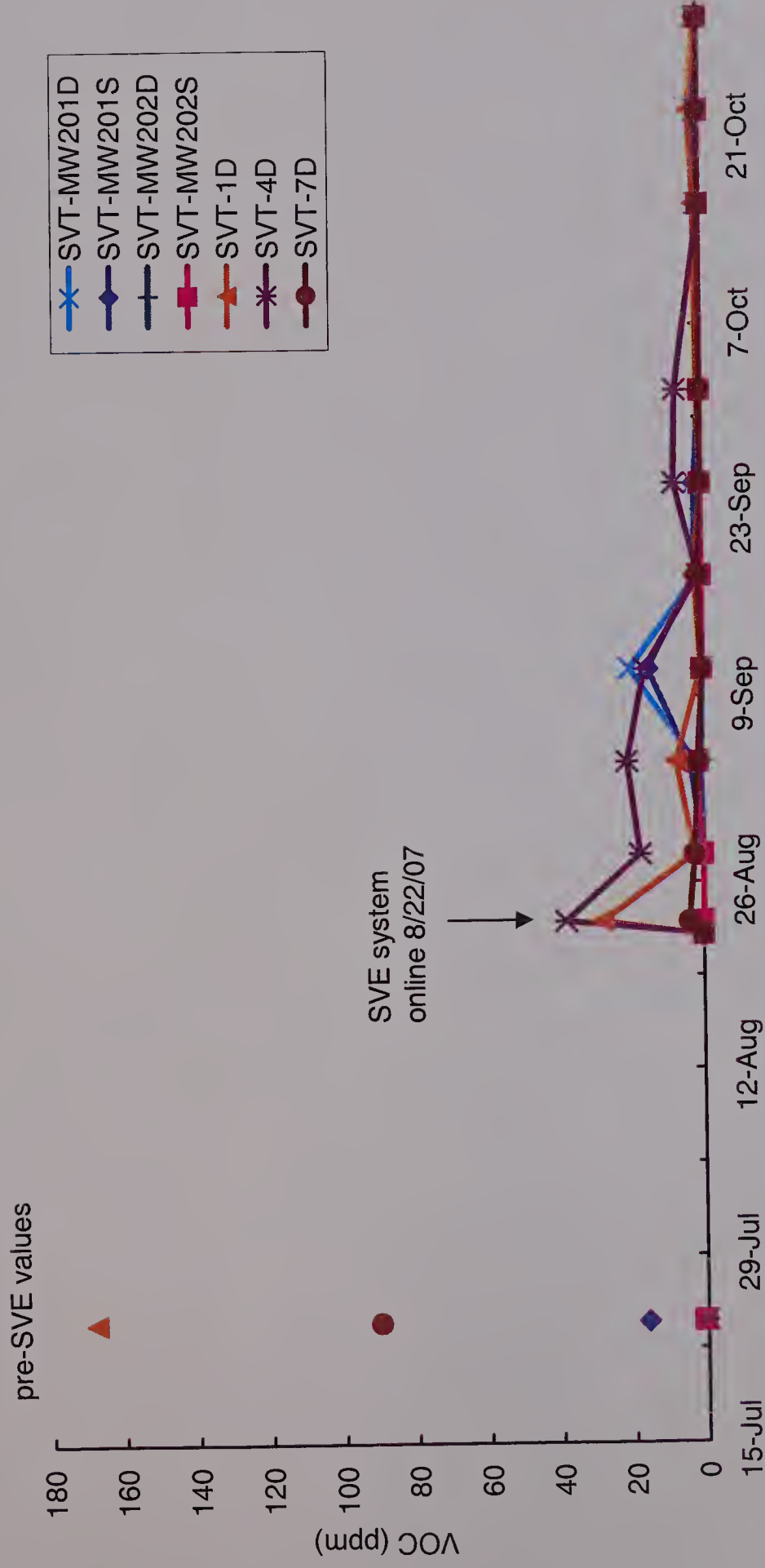


--VOC results on 6/26 and 7/10 using a PID may be biased low due to a low flow rate through the PID.

Graph 2
SVE Extraction Point VOC Concentrations
50 Tufts Street
Somerville, Massachusetts

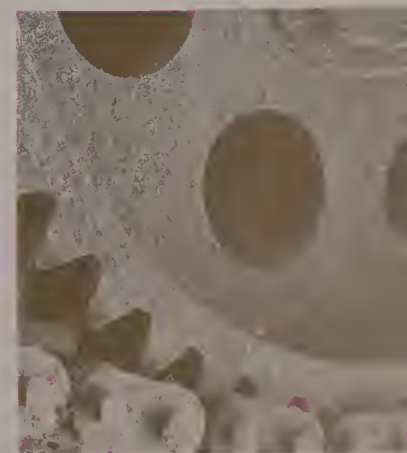
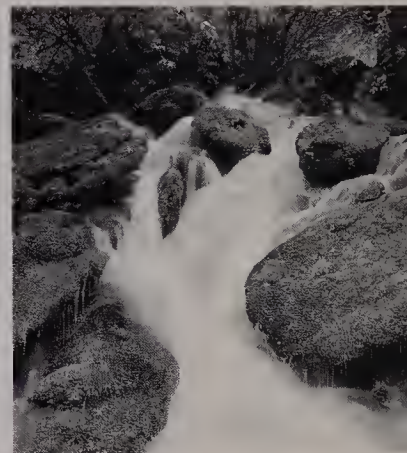
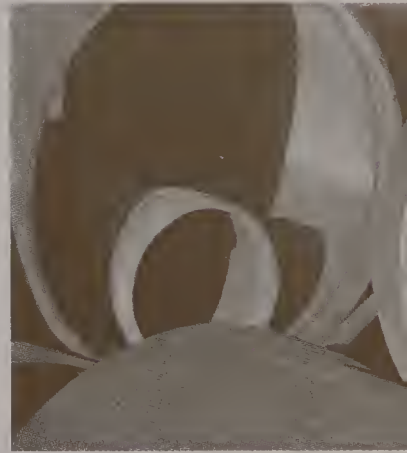


Graph 3
 Soil Vapor Monitoring Point VOC Concentrations 60 Tufts Street
 50 Tufts Street
 Somerville, Massachusetts





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ATTACHMENT D

Laboratory Analytical Report, Soil Disposal, August 17, 2007

Remedial Monitoring Report No. 7B
Lab Data Reports

50 Tufts Street, Somerville, MA
DEP RTN 3-23246

Prepared by:



Submitted to:
Mass DEP

November 2007

GEI Project 045162



